DOCUMENT RESUME

ED 272 065	HE 019 487
AUTHOR	Sell, G. Roger
TITLE	Needs Assessment in Higher Education.
INSTITUTION	National Center for Higher Education Management Systems, Boulder, Colo.
PUB DATE	80
NOTE	255p.
PUB TYPE	Guides - Non-Classroom Use (055) -- Reference Materials - Directories/Catalogs (132) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC11 Plus Postage.
DESCRIPTORS	*College Administration; College Planning; *Data Analysis; Data Collection; Decision Making; Higher Education; *Information Needs; Information Sources; Information Utilization; Institutional Research; *Management Information Systems; *Needs Assessment; Research Utilization; *User Needs (Information)
IDENTIFIERS	National Center for Higher Educ Management Systems; Needs Assessment Information System

ABSTRACT

The concepts of need and needs assessment are examined in the context of information needs for college administrators. A description is included of the conceptual framework underlying the Needs Assessment Information System (NAIS), which was developed by the National Center for Higher Education Management Systems. Attention is directed to: (1) establishing the goals and objectives for a needs assessment study; (2) identifying the audiences for the needs assessment study; (3) determining the information requirements for the study (including who will determine need, whose needs will be examined, and the kind of needs that will serve as the focus); (4) selecting sources of information for collecting and/or compiling the required needs information; (5) collecting and compiling information; (6) analyzing the needs information that has been collected and/or compiled; (7) reporting the needs information to the audiences for the study; and (8) using needs information in the management process. For each of these topics, exercises are included to assist an institution to design their own NAIS. Comparison sheets also allow examination of alternative sources, methods and personnel for collecting and compiling needs information, methods for analysis, and methods for reporting needs information. A five-page bibliography is included. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

P2-3+4

ED272065

NEEDS ASSESSMENT
IN
HIGHER EDUCATION

G. ROGER SELL

1980

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

NC HEMS

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

HE 019 487

TABLE OF CONTENTS

Page

INTRODUCTION I-1

CONCEPTUAL FRAMEWORK II-1

GOALS AND OBJECTIVES III-1

AUDIENCE IV-1

FOCUS V-1

SOURCES OF INFORMATION VI-1

COLLECTING AND COMPILING INFORMATION VII-1

ANALYSIS VIII-1

REPORTING IX-1

USE. X-1

APPENDIX A-1

I. INTRODUCTION

The assessment of needs is a fundamental activity of all education institutions. *Needs assessment* is the process of identifying, understanding, and responding to needs. Whether made explicit or not, whether done formally or informally, the assessment of needs is reflected in institutional decisions about:

- goals and objectives
- continuation of existing programs and services
- development of new programs and services
- attracting and allocating financial resources
- identifying, recruiting, selecting, and assigning personnel
- scheduling and utilizing facilities
- what to offer, to whom, how, when, where, and at what cost
- evaluating and rewarding performance

Needs assessment is an ongoing activity; it does not have a definite starting or ending point. It is essentially a communication process involving parties both internal and external to an institution. With respect to postsecondary education (PSE) institutions, needs assessment occurs at all organizational levels: course; department; division/school; institution; system. Those involved in the assessment of needs include administrators, faculty, students (learners), governing board members, and the constituencies that support a PSE institution.

Given the importance and pervasiveness of assessing needs in PSE, one would expect to find well-conceived and fully-developed "models" for needs assessment. While such "models" may exist, the following shortcomings of needs assessment in practice are generally evident: the concept of need is poorly defined, resulting in misinterpretations and faulty communications about what needs exist; needs assessment is often considered to be a product (e.g., an instrument or the report of a survey) rather than an ongoing process; needs assessment efforts are rarely evaluated, either in terms of cost or effectiveness; the objectives and audiences for needs assessment efforts are seldom clearly identified; the focus for collecting and compiling needs information seldom considers the capabilities and constraints of the institution vis-a-vis the needs of learners and communities; needs information, once collected or compiled, usually is not fully analyzed to uncover explanations for and relationships among needs; reports of needs information do not adequately consider the audiences and uses for the information; needs assessment information is not fully considered or used in the decision-making process; and, institutions may not have the expertise or technical capability to conduct certain kinds of needs assessment activities.

For these reasons, NCHEMS undertook the development of a Needs Assessment Information System (NAIS). NAIS is a "model" in the sense that it provides a design for needs assessment that can be adapted to each institution. The purpose of NAIS is to help institutional managers to:

- Identify needs information useful in the management of their institutions;
- Compile needs information from existing sources or collect it themselves;
- Analyze and report needs information in a suitable form;
- Use needs information in the management of their institutions.

When fully developed and implemented within an institution, NAIS can help institutional managers overcome shortcomings in their present capacity for assessing needs.

Section II of this notebook describes the conceptual framework from which NAIS has been developed. The concepts of need and needs assessment are examined in the context of information needs for the management of PSE institutions.

The following sections each describe a problem area for needs assessment and procedures for dealing with the problems.

III. Establishing the goals and objectives for a needs assessment study

IV. Identifying the audience(s) for the needs assessment study

V. Determining the information requirements for the study, including who will determine need, whose needs will be examined, and the kind of needs that will serve as the focus

VI. Selecting sources of information for collecting and/or compiling the required needs information

VII. Collecting and compiling the required needs information

VIII. Analyzing the needs information that has been collected and/or compiled

IX. Reporting the needs information to the audience(s) for the study

X Using needs information in the management process

Within each section, exercises have been prepared to assist an institution in designing their own NAIS. In addition, comparison sheets have been prepared for the examination of alternative sources, methods and personnel for collecting and compiling needs information, methods for the analysis of needs information, and methods for reporting needs information.

II. CONCEPTUAL FRAMEWORK

This section presents the central concepts that underlie the design of a needs assessment informition system (NAIS). These concepts are: need, needs assessment, management, and information system.

Need

McMahon (1970), Lenning (1978), and Burton and Merrill (1977) and Witkin (1975) have summarized the literature of needs and the definitions associated with the term. Although one concept of need, exemplified by Maslow (1970), conceives of it as a constantly motivating force in the lives of all people, moving them to increasingly advanced levels in a hierarchy of needs, most users of the term are speaking of a gap--a difference between some existing state and some ideal or satisfactory state. Lenning tries to incorporate both of these concepts in his definition:

> A need is a necessary or desirable condition, state or situation--whether it be a needed end result that is actuality (met need) or a discrepancy that needs to be closed between a current or projected actuality and a needed end result (unmet need)--as judged by a relevant person or group using multiple objective criteria that have been agreed upon. (p. 20)

The problem with assessing need is that we are usually talking about something other than a need--a want, for instance, or a demand. Bradshaw's four kinds of needs address this problem. He identified

1. Normative needs: Present when an individual or group has less than some established standard.
2. Felt need: Synonymous with want.

3. Expressed need: Synonymous with demand.
4. Comparative need: Exists when a person or group which is similar to another person or group is failing to receive some good or service which the other group is receiving.

To these four, Burton and Merrill (1977) have added:

5. Anticipated need. Having to do with the projected demands of the future.

All these needs are of the gap or discrepancy type. They exist because there is a gap between a present and an ideal (or satisfactory) condition. Examples of the five kinds of needs are shown in Table II-1.

Educational Need

Monette (1977) defines an educational need as one which is "capable of being satisfied through a learning experience which can provide appropriate knowledge, skills, or attitudes." (p. 119) Dave (1976) refers to these as learning needs. The institutional philosophy will determine what are considered valid educational needs in practice. This will also determine which information is required in the assessment of needs.

(See Dave, 1976, and Williams, 1978, for a discussion of the relationship between societal needs and educational needs.)

Needs Assessment

According to Peat, Marwick & Mitchell (1978);

> needs assessment includes all those formal and informal activities that an organization uses to investigate potential markets for particular programs before offering the programs. Needs assessment may be based on data that are systematically collected, or it may be quite informal, as when a program director, with little or no consultation, judges that a particular program will attract participants. (p. III-5)

Table II-1
An Illustration of Kinds of Needs

AREA OF NEED / KIND OF NEED	BASIC OR GENERAL EDUCATION	RECREATION/LEISURE	OCCUPATIONAL
Normative	Education level below norm for region, specific group, country, etc.	Fitness level below norm for age, sex, etc.	Income level below poverty level, or below median for country, region, locality, specific group.
Felt	Person would like to be expert in some field. Person wants a certain academic credential.	Person would like to play the piano. Person wants to learn a foreign language. Person wishes to be able to sew.	Person wants "a better job." Person wants "a higher salary." Person wants "more job satisfaction."
Expressed	Person takes (GED) exam. Person borrows self-help texts in library to prepare for Graduate Record Exam. Person applies to institution for entrance into program.	Person calls a music store to ask about piano lessons. Person enrolls in Free School Spanish course. Person sends for booklet: Learn to Sew at Home.	Person signs up for vocational education course. Person enrolls in correspondence course on job-related topic. Person sends in coupon for information regarding an advertised proprietary school program.
Comparative	Others in same profession have higher degree. Friends, spouse are experts.	Neighbor can play piano. Friends all know how to sew.	Blacks have jobs of lower status than whites. Women earn less than men. Fewer minorities in management positions.
Anticipated	Upcoming licensing standards will impose necessity for credential. Possible career change might necessitate new expertise.	Person might take a trip to Europe some day and need language. Future move to new home might require sewing spreads, drapes.	Job obsolescence will mean necessary retraining. Automation will put x people out of work. New technology will require certain skills.

Bowers and Associates (1976) describe nine steps in needs assessment: identifying people and roles; speaking the same language; stating concerns and goals; finding the needs; measuring and ranking the needs; setting priorities; determining the feasibility of meeting the needs; planning the program; and continuous reassessment. (p. 7)

Lenning's (1977) definition of needs assessment is:

> an objective and systematic process for identifying and assessing specific types of met and unmet needs of an individual, group, organization, institution, community, or society. It provides analytic information to selected educational decision makers that will be of assistance to them in making needed decisions for an educational course, program, institution, or educational system of institutions. (p. 43)

Of all the messages passed on to us in telephone interviews and--to a somewhat lesser extent--in the literature, this was the most important: needs assessment is a process, not a product. It is not a synonym for survey, but involves many methods going on constantly and simultaneously. Needs are constantly changing; people and the society are in flux, so any survey or other method which identifies needs at a given time can be misleading even a short while later. Needs assessment must therefore be thought of as a process of keeping in tune with the institution's publics. It involves communication between the community and the institution. The process itself is dynamic and in constant flux, because the institution, the community, and the individual learners are all changing all the time. Not only are they changing as adult development or organizational growth take place, they are changing in response to the changes in one another and the influences they mutually exert upon each other. Our definition of needs assessment is: a process of identifying, understanding, and responding to needs.

Kempfer (quoted in McMahon, 1970) concluded that the best approach to assessing needs is close contact with prospective clients, use of all pertinent information, and a combination of needs assessment methods. Boyer (1976) suggests continuous reassessment as the last step in the needs assessment process, thus implying a cyclical activity. In his section on pre-operational planning, development strategy, Medsker (1975) advocates assessing institutional options, including resources, structure, and institutional climate; external environmental conditions, including attitudes and policies of significant agencies such as state coordinating boards and legislative bodies; potential client needs; and programs offered by other institutions.

Aspects of Needs Assessment

There are three aspects of needs assessment most critical to a postsecondary education institution. These aspects are: learner assessment, community assessment, and provider assessment.

1. Learner Assessment. Learners are those for whom learning activities are offered. Synonyms for learners are students, enrollees, participants, clients, and target audiences. From a provider perspective, three groups of learners should be considered in the assessment of learner needs: former learners not presently served; present learners (clients); and potential learners (clients). Potential learners include former and present learners, as well as those not yet served.

Figure II-1 shows the components for a learner needs assessment. Learner needs are individual deficiencies (problems) that could be satisfied through a learning experience. Learner needs may be active (conscious) or latent

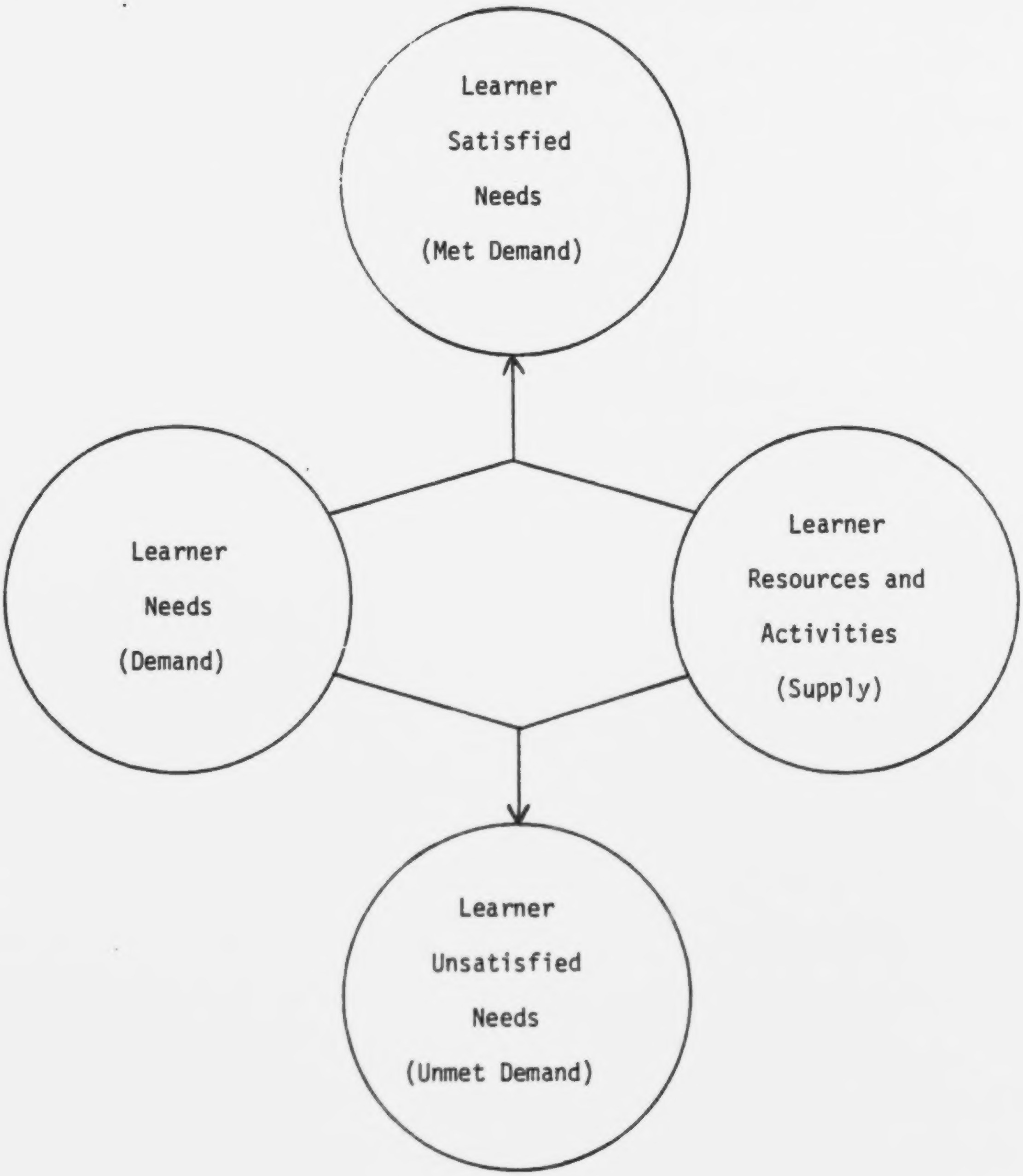

Learner
Satisfied
Needs
(Met Demand)
Learner
Needs
(Demand)
Learner
Resources and
Activities
(Supply)
Learner
Unsatisfied
Needs
(Unmet Demand)

Figure II-1

Components for an Assessment of Learner Needs (subconscious, unconscious). The assessment of learner needs may focus on one individual learner or a group of learners. Learner resources and activities interact with learner needs in determining whether needs are satisfied (met demand) or not satisfied (unmet demand). Learner resources and activities represent the individual supply for meeting demand. Learner resources include financial resources, time resources, physical resources, informational resources, and human resources (learning capabilities). Each of these learner resources can influence the demand for educational services and programs. Learner activities include those that are self-provided as well as those that are provided by other persons, groups, and institutions. A learner satisfied need (met demand) results when learner resources and activities match learner needs; a learner unsatisfied need (unmet demand) results when learner needs are not matched by the resources and activities of the learner. While satisfied needs may in turn stimulate the "need" for more learning activities,* the focus of the learner assessment should be on the identification and description of unsatisfied needs.

2. Community Assessment. A community is a societal context within which learning activities occur. The term "community" is used most frequently to mean a geographical location defined on the basis of political boundaries, population density, economic activity, and/or natural resources. Within a geographical-based community, or cutting across geographical-based communities, interest-based communities can be identified. The members of interest-based communities belong to organizations whose primary purposes are recreational, cultural, religious, educational, governmental, private enterprises, etc. A

---

*This is equivalent to saying that those with higher levels of education want more education, as do those who have had satisfying educational experiences.

third meaning of the term "community" refers to a group defined on the basis of personal traits, e.g., sex, age, education level, marital status, racial/ethnic group, etc. A "trait-based" community intersects both geographical-based and interest-based communities. From a provider perspective, each of these three types of communities is important for the identification and description of learners, as well as for the identification and description of alternative, cooperative, and competing providers of learning activities. In short, a community provides a context within which a provider can assess the supply of and demand for learning activities.

Figure II-2 shows the components for a community needs assessment. These components are parallel to those for a learner needs assessment. Community needs are group deficiencies (problems) that potentially can be satisfied through a learning experience. As with learner needs, community needs can be active or latent. While individual learner and provider needs contribute to (are indicators of) community needs, when summed they do not equal community needs because community needs are greater than the sum of the parts. Community resources and activities interact with community needs in determining whether the community needs are satisfied or not. Community resources include human, informational, physical, time, and financial resources. As with learners, each of these community resources influences the demand for educational programs and services. Community activities include all learning activities that are provided in the community. These activities include those offered by providers who are located within the community, as well as those who are located outside the community. A community satisfied need (met demand) results when community resources and activities match community needs; a community unsatisfied need (unmet demand) results when community needs are not matched

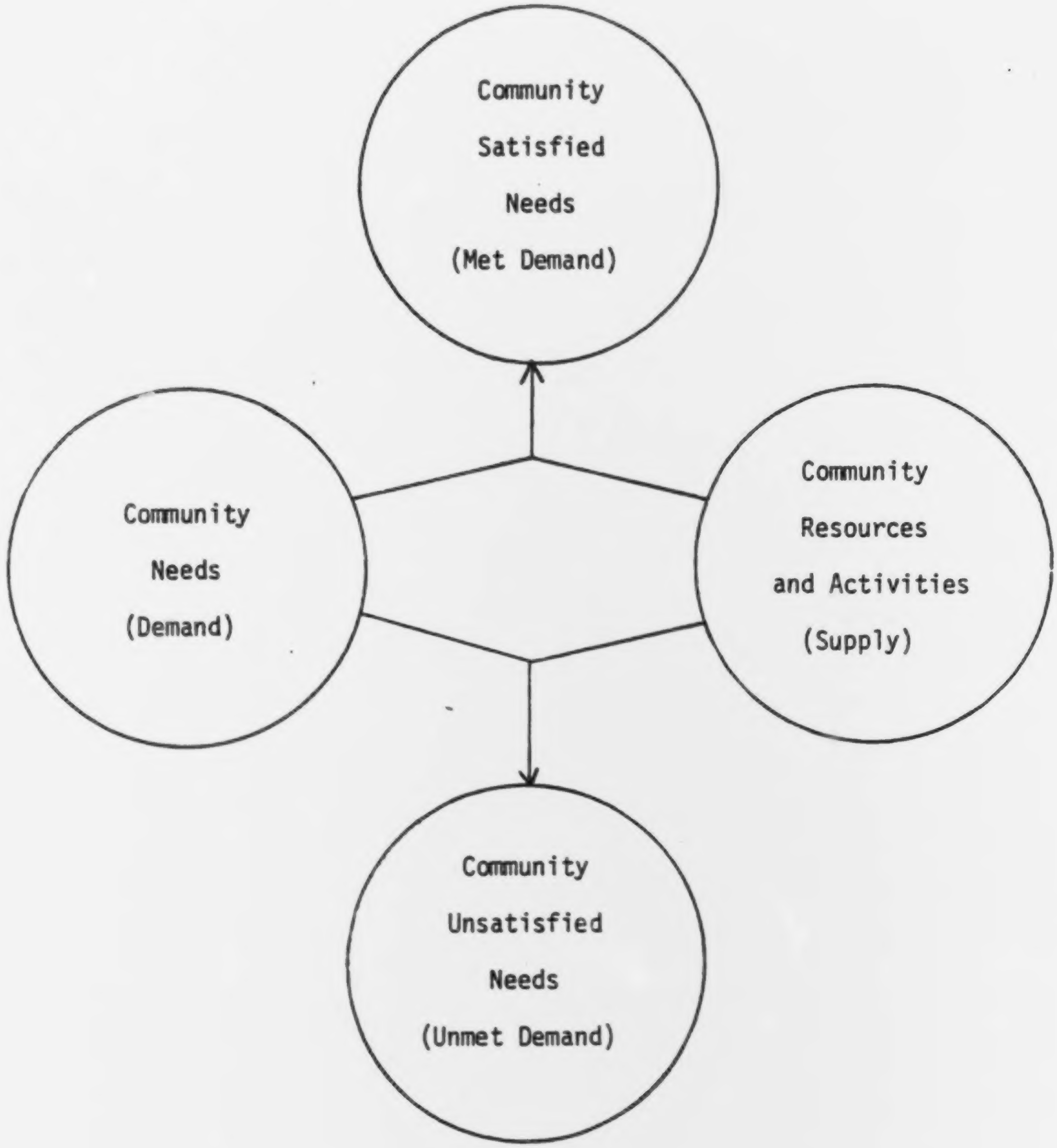

Community
Satisfied
Needs
(Met Demand)
Community
Needs
(Demand)
Community
Resources
and Activities
(Supply)
Community
Unsatisfied
Needs
(Unmet Demand)

Figure II-2

Components for an Assessment of Community Needs by the resources and activities of the community. As with learner needs, satisfied community needs may stimulate the need for more learning activities. The focus of community assessment, however, should be on the identification and description of unsatisfied needs.

3. Provider Assessment. A provider is a person, group, or organization by whom learning activities are offered. For purposes of this section, only organizational providers are discussed. (Note: A learner may serve as his or her own provider.) In addition, providers are distinguished from sponsors; a sponsor supports learning activities through endorsement and/or financial resources. The provider of a learning activity also may be its sponsor. In the case of contracted services, the contractor would be the provider and the contracting agency would be the sponsor. Within a provider organization, the total organizational entity (e.g., college, university) would be identified as the parent organization through which the activity is provided and the organization sub-unit (e.g., division, department) providing the activity would be identified as the specific provider. Organizational providers include--in addition to schools, colleges, and universities--business and industrial organizations, labor unions, park and recreation departments, governmental agencies (Federal, State, county, local), religious organizations, libraries, museums, professional and trade associations, voluntary organizations, the military, mass media organizations, and a variety of social and community organizations. These organizations not only contribute to the supply of educational programs and services, but also create demands for programs and services.

Figure II-3 shows the components for an organizational provider assessment. The organization's mission, role, and scope of activities is the basic structure within which learning activities are provided. An organization's philosophy and general purpose is expressed in its mission statement. The role of the organization is defined in relation to other providers, and organizational scope refers to the kind and extent of activities which an organization undertakes. The consideration of mission, role, and scope can apply to an organization as a total entity as well as to a sub-unit of a parent organization (e.g., a department within a division, a division with an organization. an organization within a system). Organizational constraints are barriers, inhibitors, and controls within which an organization functions. Some organizational constraints are a matter of policy (e.g., organization X has a defined service area or can offer only noncredit courses); other organizational constraints are procedural or structural (e.g., in order to offer a certain program, an organization must receive approval from X committee or X administrator). Although difficult to define, another kind of constraint is conceptual, that is, a mind set that does not permit alternative perspectives or options. These kinds of constraints impact on the programs and services that an organization can offer. Organizational resources are the human, financial, physical, time, and informational resources of the provider. In combination, an organization's mission/role/scope, constraints, and resources determine the educational programs and services it provides.

Table II-2 brings together the three aspects of needs assessment and indicates relationships among them.

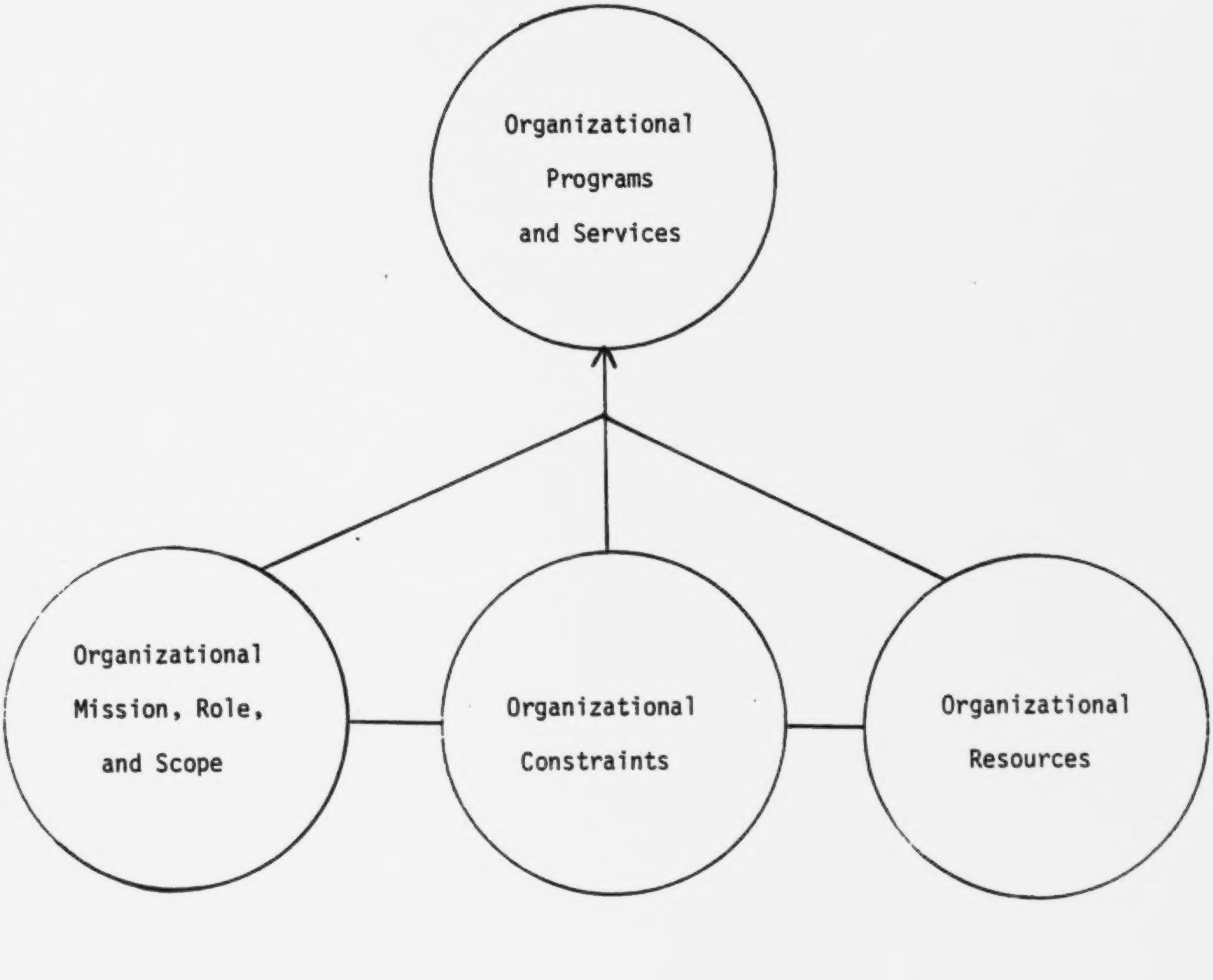

Organizational Programs and Services
Organizational Mission, Role, and Scope
Organizational Constraints
Organizational Resources

Figure II-3

Components for an Assessment of Organizational Providers

Table II-2

Relationships Among the Three Aspects of Needs Assessment

Target of Assessment	Demand Factors	Supply Factors
Learners	Learner needs, satisfied needs, and unsatisfied needs	Learners resources and activities
Communities (including all learners and providers	Community needs, satisfied needs, and unsatisfied needs	Community resources and activities
Providers	(Provider needs)	Provider programs and services (mission/role/scope; constraints; resources)

Examples of Ongoing Needs Assessment

Acting on Lewin's premise that there is nothing so practical as a good theory, several institutions (probably representative of many more) practice ongoing needs assessment involving learners, communities, and providers. At the Community College of Vermont, a philosophy of knowing the community and being responsive to it is carried out by encouraging staff members to be involved in the community. Staff participate on community boards and civic activities and are in constant contact with representatives of business and industry in their community associations. They are therefore aware of the community, the organizations and institutions within it, and trends affecting individuals. Because of their contacts, they have access to other community resources and a first-hand opportunity to provide meaningful service ideas to their institution. Responsiveness to suggestions of community members is of the utmost importance, in order to maintain credibility and encourage further input.

The Miami/Dade Community College staff is heavily involved in its community. An exciting aspect of their involvement is that it is integral to the system, which means that faculty members may choose such involvement as one way of performing their service to the college. Participation in community affairs may be substituted for the teaching of a course or community work may be rewarded with extra pay for faculty. The work in the community is part of Miami/Dade's understanding of its community role; as a working part of the community, it not only provides educational services to members of the community as individuals or in groups, it takes part in all kinds of community activities.

An innovative needs assessment process which is ongoing is carried out by the American Management Association. They convene semiannually fourteen councils of thirty members each. Each council is composed of leading practitioners in one of the interest areas of the Association. Their task at their summer and winter meetings is to discuss what is happening in their professions--what is new since they spoke last, what new demands are being made on them, what changes are taking place, what they are doing more and what less. As the association members listen to these discussions, they become aware of trends which are likely to be of importance to the general membership. These ideas form an important part of the input into the decision making which underlies the offering of some fifty seminars each week by the Association.

A technique described by McMahon (1970) involves the story of a county agent who had a special method for finding out about community needs. "He would go into a rural community and seat himself outside the general store. He was a confirmed whittler, and he would take out his pocketknife and a block of wood, and he would sit there and whittle. As he whittled, he would listen. At the end of the day, it is alleged, he would know all that was necessary to know about the needs of that community." (p. 38)

While the authors do not advocate taking up whittling as a hobby, they do suggest that sensitivity to what is going on in the community involves being out in it with one's ears and eyes open as a sensitive and active community participant. We see needs assessment as a communication system linking the institution with the community and the people in it.

Exercise

One feature of this notebook is the inclusion of exercises to be carried out by institutional management teams. These exercises are to be found within each section. After the team has had the opportunity to study the materials included in the section, the members are encouraged to "customize" the notebook to their needs by performing an exercise which encourages them to apply the principles in their own institution.

As an example, the exercise for this section follows:

> Within the context of your institution, what meaning does needs assessment have to you?
>
> What activities are you now involved in which you can now identify as being part of needs assessment?
>
> Are there activities regularly carried out by your institutions which could be broadly interpreted as needs assessment or which provide the potential for needs assessment information gathering? (e.g., participating in community activities, liaison with state and local government agencies; inter-institutional cooperation).

Management

Management is the process of achieving desired results by influencing human behavior in a dynamic context. So defined, management includes aspects of both art and science. This definition of management also permits alternative philosophies and styles of management, e.g., the operational approach, the systems approach, the quantitative approach, the behavioral approach.

All organizations require management tasks for maintenance, development, and renewal. Some of these management tasks for collegiate institutions are: determining and clarifying goals and policies; designing and developing activities intended to realize selected goals; acquiring resources, allocating resources; implementing and monitoring activities; and evaluating performance. Figure II-4 illustrates these tasks within the management process. These tasks are described more fully in Section X, Uses of Needs Assessment Information.

The management process occurs at all levels of the collegiate institution. These levels include: systems level (where applicable); institution-wide level; division level; department level; course level. Table II-3 illustrates the interrelationship among levels and management tasks. (Note: the management process also is applicable to the local, State, and Federal levels.) Management tasks, so defined, are performed not only by administrators, but also by faculty and staff. (Note: the management concept also is applicable to students and other clients of collegiate institutions.)

Marketing as a Management Activity

Lamoureux (1977) defines marketing in King's terms:

> managerial philosophy concerned with the mobilization and control of total corporate effort for the purpose of helping consumers solve selected problems in ways compatible with planned enhancement of the profit position of the firm. (p. 3)

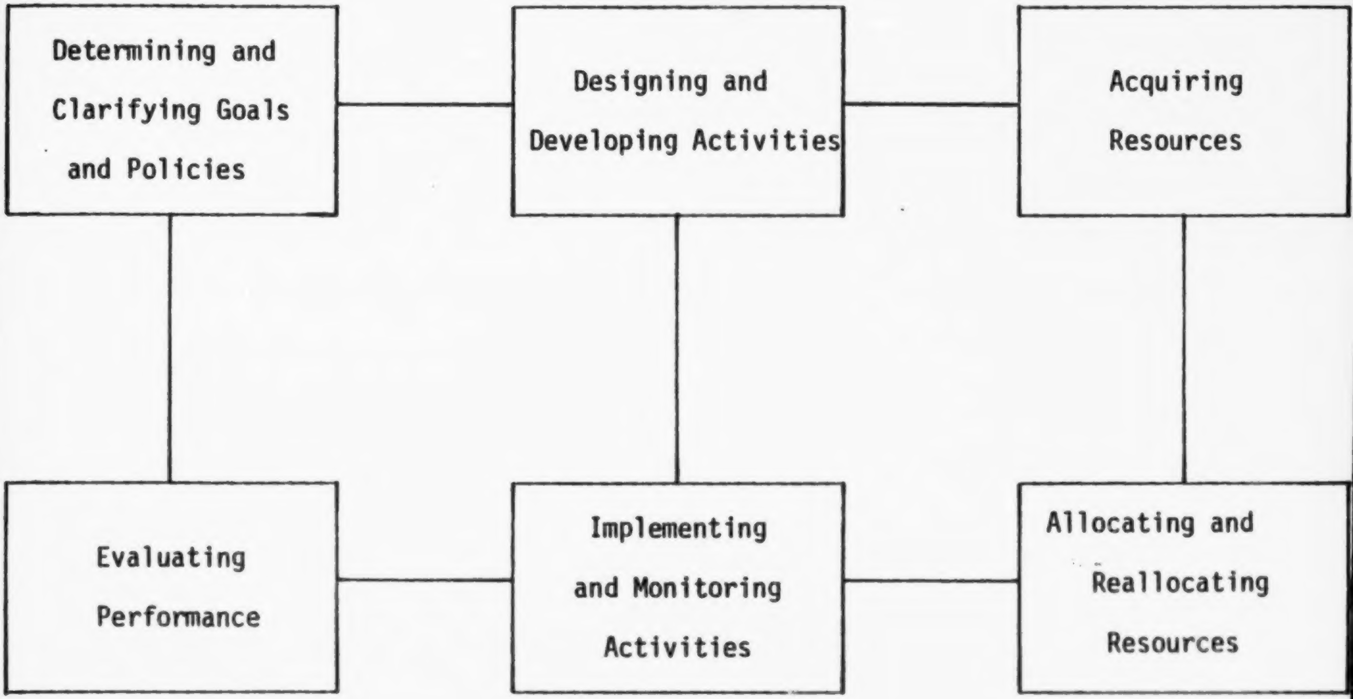

Determining and Clarifying Goals and Policies
Designing and Developing Activities
Acquiring Resources
Evaluating Performance
Implementing and Monitoring Activities
Allocating and Reallocating Resources

Figure II-4

The Management Process

Table II-3
Management Tasks and Levels Within Collegiate Institutions

Mgmt. Tasks / Inst. Levels	Determining and Clarifying Goals and Policies	Designing and Developing Activities	Acquiring Resources	Allocating and Reallocating Resources	Implementing and Monitoring Activities	Evaluating Performance
System						
Institution						
Division						
Department						
Course						

He also uses the concept of the "marketing mix" to describe the process of marketing in adult education, which includès the course (product), the locations where it should be offered (distribution), the price structure, and the promotional activities (p. 5). His work on drawing parallels between business and education is very compelling.

However, such parallels are often rejected by the academic community. As McMahon (1970) warns, we often claim to respond to the felt needs of the people, but all too often, it is the people who respond to our guesses of what they want or need.

For those who are willing to consider business terminology as appropriate, two important concepts (previously introduced) are supply and demand. Much of what is collected in surveys is demand data. Also important is the creation of demand, where segments of the population can be identified as having a need which they do not feel or recognize. Creating a demand for education is an aspect of marketing.

Another aspect of demand affecting the institution is an understanding of the real situation which is a determinant of need. An example of this is the recent recognition of adult developmental phases and their impact on adults' learning needs. Although Havighurst (1972) recognized these phases years ago, it is only within the past few years that they have been accepted and promulgated by adult educators. McCoy (1977) reports on an application of this underlying need at the Adult Life Resource Center, University of Kansas. Lehman and Lester (1978) addressed a similar situation from another viewpoint, that of cross-generation contacts in adult education. Spikes looks at continuing education for nurses as it is influenced by current trends. Similar trends with potential impact are: the women's movement, inflation, changes in family structure, the energy crisis, and technological advances.

Supply data have been collected in various forms, often creating a product called a directory. Some interesting supply data have been collected by consulting firms called upon by governmental agencies to perform contracting services. For instance, Nolfi (1973) produced supply data concerning institutions providing part-time and continuing education in Massachusetts; and Peat, Marwick and Mitchell (1978) considered the supply of adult education in communities in Florida and Rhode Island.

Needs Assessment Information System

An information system is a process for the collection, storage, and retrieval of information which can be used, often by management. The NAIS is a system for collecting, storing, and retrieving needs assessment information for the use of postsecondary education management. Although needs assessment is often thought of only in terms of the collecting of information, the process of providing meaningful information for the use of management must be much broader than simply collection. Therefore we have described a Needs Assessment Information System which involves pre-collection activities: identifying goals and and objectives, describing audiences, and selecting a focus; actual collection (and compiling) activities, including the selection of sources; and post-collection activities: analysis, reporting, and facilitation of use.

We see the Needs Assessment Information System as being part of the general management information system which underlies the management process. Its day-to-day operation will, in fact, be carried out by some branch of the institution's administrative unit. The information collected and stored can be retrieved by management for any management task. (Table X-1 gives some examples of the use of needs assessment information for specific management tasks.) The interface between learners and the NAIS will take place during collection activities, as learners are asked to respond to questionnaires, to grant interviews, to participate in hearings of meetings, or in other ways to indicate their needs. Such is also the case for the interface with the community. Community leaders or groups will come into direct contact with the NAIS as they express themselves through Delphi surveys, group meetings, or informal conversations with those assessing needs. The provider acts as supplier of needs information for the system also. For this purpose, administrators may be asked to fill out forms or to be interviewed; the internal records of the institution may be examined; or other institutional personnel (faculty, staff, or students) may provide information in a formal or informal manner. Learners, all or part of the community, and/or all or part of the provider institution may also interface with the NAIS as audience members in whose interest the assessment is made, to whom the report of the assessment is given, and for whose benefit the results may be used. Figure II-5 represents relationships among the learner needs assessment, community needs assessment, and provider assessment; the management process; and the Needs Assessment Information System.

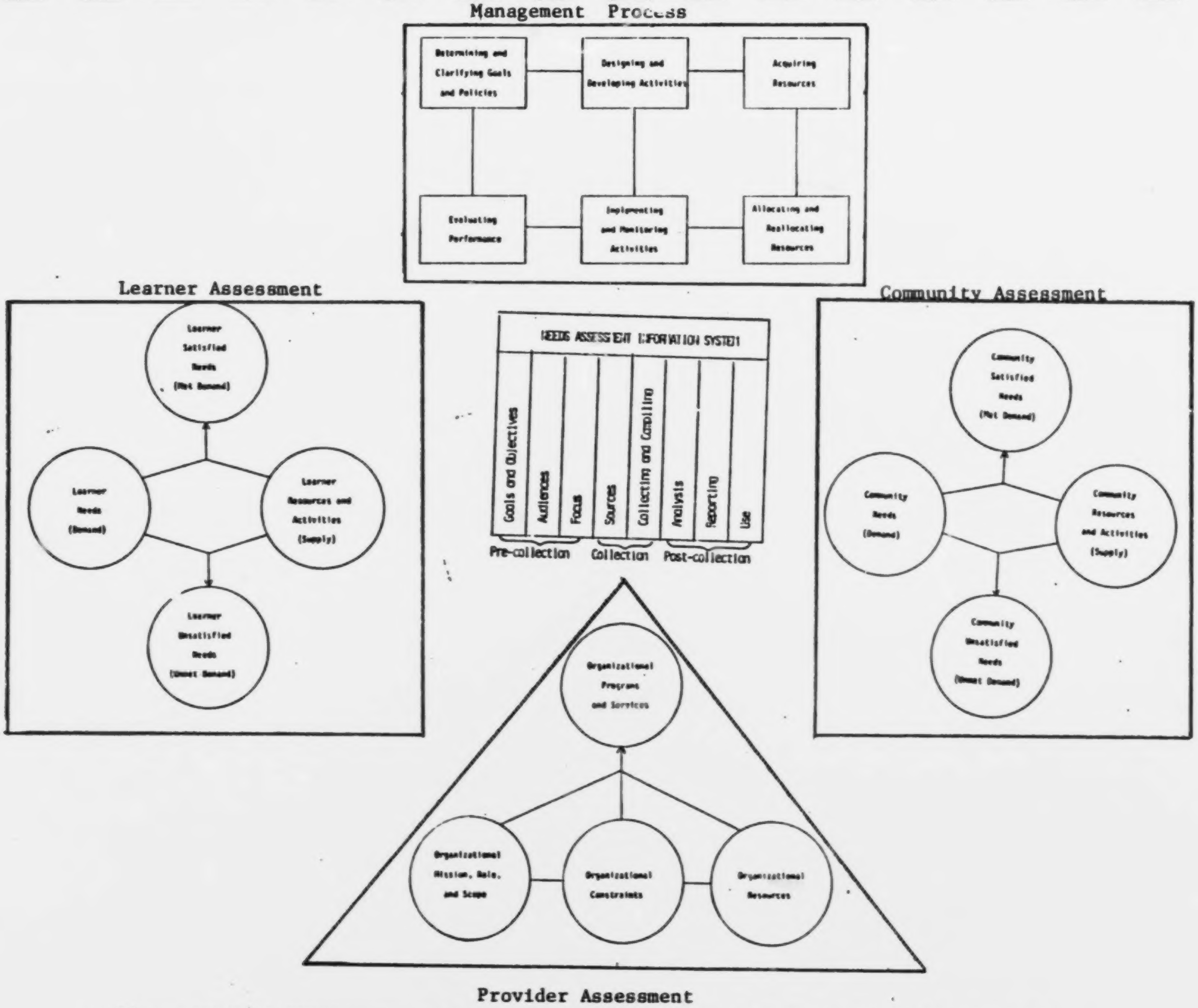

Management Process
Determining and Clarifying Goals and Policies
Designing and Developing Activities
Acquiring Resources
Evaluating Performance
Implementing and Monitoring Activities
Allocating and Reallocating Resources
Learner Assessment
Learner Satisfied Needs (Met Demand)
Learner Needs (Demand)
Learner Resources and Activities (Supply)
Learner Unsatisfied Needs (Unmet Demand)
NEEDS ASSESSMENT INFORMATION SYSTEM
Goals and Objectives
Audiences
Focus
Sources
Collecting and Compiling
Analysis
Reporting
Use
Pre-collection
Collection
Post-collection
Community Assessment
Community Satisfied Needs (Met Demand)
Community Needs (Demand)
Community Resources and Activities (Supply)
Community Unsatisfied Needs (Unmet Demand)
Organizational Programs and Services
Organizational Mission, Role, and Scope
Organizational Constraints
Organizational Resources
Provider Assessment

Figure II-5. A REPRESENTATION OF AN INFORMATION SYSTEM FOR ASSISTING MANAGEMENT BY ASSESSING NEEDS

BEST COPY AVAILABLE

III. GOALS AND OBJECTIVES

The most important question to be asked as the institution begins to think of assessing needs concerns the goals and objectives of needs assessment. Why is needs assessment done? Why should it be done at all? Why should your institution become involved in this activity?

Goals

A survey of the literature and interviews with administrators yielded ten major categories of goals for needs assessment. All of these tie into the management process. All imply a targeted audience for the information collected. These categories of goals, with some examples, are:

1. Identification of problems for purposes of research, planning, and solution,
   a. to discover unexpected or hidden needs that have resulted in ongoing problems,
   b. to focus attention on salient problems and thus facilitating planning decisions about program development, modification, and efficient utilization and allocation of time, effort and resources,
   c. to identify areas of concern requiring research and development.
2. Planning and developing activities, including writing proposals for new projects,
   a. to improve institutional functioning,
   b. to provide guidance for renewal in the institution,
   c. to increase validity, reliability and accountability in planning and other decision making.

3. Fostering support and involvement among public and special groups,
   a. to assist in communicating a compelling picture to the community, governing boards, and funders,
   b. to allow many relevant people who are not educators, including recipients of services, to contribute to the planning process,
   c. to juxtapose an open, public agenda against the hidden or specialized agendas of decision makers.
4. Goal setting and prioritizing,
   a. to provide guidance for making defensible, cost-effective choices among program alternatives,
   b. to provide direction for priority-setting that will aid in allocating amounts of scarce resources,
   c. to provide a means for deciding on the educational objectives most appropriate for a particular situation.
5. Assessing the perceptions and image of the institution,
   a. to discover variations in how different groups perceive that the institution is doing its job,
   b. to explore causes of loss in public support and help set priorities for corrective action,
   c. to affect image and perceptions of the community about the institution or educational systems.
6. Increasing the size of the student body,
7. Justifying existing programs,
8. Evaluating performance,
9. Developing a data base,
10. Satisfying a mandate from another jurisdiction, such as a funding source.*

---

*Lenning (1977)

The multiplicity of goals for needs assessment determines that the outcomes and uses of various needs assessment activities will be very different. The importance of being aware of one's purpose cannot be overemphasized. The purpose will be related to the audience, the focus, the source of information, the method chosen, the analysis, the reporting, and the use of the information obtained from the needs assessment.

Objectives

At a more down-to-earth level, needs assessment will probably have very practical objectives. Some examples of such specific objectives follow.

> To find out if we should continue to offer an evening course in Beginning Spanish.
>
> To increase our enrollment by 800 full-time enrollment students by Fall 1980.
>
> To decide whether to eliminate the School of Social Work or the Graduate School of Librarianship, faced with loss of significant sources of support.
>
> To increase the number of people in the State of ____________ who name our school when asked to list five colleges in the state.
>
> To compile a directory of learning resources for the adults of Boulder County, Colorado.
>
> To find out why there is such a poor participation rate in the organization's staff development program.
>
> To identify five occupations which will need more trained personnel in 1982 so we can plan to offer vocational courses which will prepare people for jobs which can realistically be expected to exist for them at the end of their training.
>
> To determine if there is a market for an external degree program in this state.
>
> To find out how many senior citizens would enroll if we offered courses at certain times or in certain locations or on certain subjects or at reduced tuition.
>
> To test the feasibility of raising tuition by 10% beginning with the fall of 1980.

The more specific the objectives can be made, the more satisfactory will be the outcomes of the needs assessment.

ERCISE

Why do you want to assess needs?

What is your goal?

1. Identify problems?
2. Plan future activities?
3. Foster public support and involvement?
4. Set goals and priorities?
5. Assess public perceptions of institution?
6. Increase number of students?
7. Justify existing program?
8. Evaluate performance?
9. Develop data base?
10. Satisfy a mandate?
11. Other?

What is your specific objective?

Where possible, identify a goal area above, a target date, a target group, a target number of some kind, and a specific product or outcome to be expected.

If there is more than one objective, consider whether the same information might be needed to reach several objectives. If a completely different set of information items must be collected from a completely different target group, you may wish to reconsider one or more of the objectives. However, if similar information from a similar target group can yield results satisfying more than one objective, combining these objectives is ideal.

IV. AUDIENCE

For whom is the needs assessment being done? This question relates to the objective of the assessment function in a very immediate way. If the objective is to satisfy a mandate, the audience is the agency demanding that the assessment be made. If the objective is to supply input into the decision-making process, the audience is probably a group of administrators. If the objective is to improve the image of the institution, the audience will be the institution's publics.

Several possible audiences are:

- Within the institution:
  - Students
  - Faculty Members
  - Department Chairmen
  - Deans
  - Other Administrators
  - Staff Members and Support Groups
- Outside the Institution:
  - Federal Government as Regulator or Fundor
  - State Agency
  - Foundation
  - Corporate Funding Source
  - Prospective Students
  - Employers
  - Other Educational Institutions
  - Accrediting Agencies
  - Licensing Bodies
  - Professional Associations

Unions

Community Agencies

Organizations in the Community: Civic, Religious, Social, Economic, etc.

The importance of determining the audience is great. Not only is this variable related to objectives, but to all the other components of the NAIS. For instance, the audience will be a determinant of sources of information, because certain sources will be considered valuable by certain audiences. A professional audience will probably prefer more stringent data collection activities and more sophisticated analytic techniques. A lay audience will best be approached with reporting which is informal, brief, and easy-to-understand. The usefulness of the information will be far greater if the audience is borne in mind from the outset.

The readiness of the audience is also problematic. If a department is prepared to expand the effort, time, and other resources necessary to assess needs, understands the amounts of each of these resources required, and is ready to implement its findings, whatever they be, it will have a far greater chance of benefitting from the needs assessment activities it undertakes than will an administrative unit which is not so ready. It may be necessary to precede actual needs assessment activities with readiness action such as simulations, role-plays, discussions, and other educational preparation for those who will be the audience for the needs assessment information.

A possibility which institutions may wish to explore is the potential for addressing more than one audience with information about needs. For instance, if an institution carries out a survey in order to show need in connection with a proposal to a funding agency, it might publicize the results in order to show the needs for its services in the community. It could issue a press release, including the needs information in a form suitable for general consumption, and reach a large audience of the public through the newspapers, radio, and tv. Such efforts to increase the value of each item of information gathered by presenting it to a diversified audience are not only financially sound, but are considerate of those being surveyed. The amount of telephone and door-to-door contact for research of all kinds has reached proportions which require such consideration.

EXERCISE

Who is the audience for your needs assessment activities and information?

Who asked for the information?

Who will use the information?

Who will benefit from the information?

Who will receive the report you write or present?

Is your audience within your institution?

Specify:

Is your audience outside of your institution?

Specify:

Do you know members of the audience personally?

What is the level of education
the active interest
the statistical sophistication
the readiness
the preferences for certain sources, methods, formats, kinds of information
the needs
the perceptions
the prejudices
the satisfaction
} of your audience

V. FOCUS

After establishing objectives and defining the audience, the question of focus arises. Focus refers to the center of attention of the needs assessment: the needs themselves. Who determines that a need exists? Whose needs? What needs will be "assessed"? What information about needs is required for the assessment?

In this section, we address these questions and present a classification structure for identifying needs. In connection with this classification structure, we suggest some areas in which specific information about needs may be sought. Then we identify some sample questions in these areas which come from instruments collected during this project.

Who determines need?

An all-important question deals with the judgment that a need exists and/or that it ought to be responded to. Clearly, this is a value judgment. The problem, according to McMahon (1970), is that, all too often, it has been the educator who has determined needs by deciding what offerings the institution will make to the public. "Determination of need," he says, "requires a meeting of the minds between educator and prospective client." (p. 22)

In describing how learning needs should be assessed, Dave (1976) asks: "What should be the role of the local community, national authorities, specialists (e.g., in agriculture) and others in determining learning needs of a particular rural area and especially the poorer pockets within the area?" (p. 13)

Peat, Marwick, & Mitchell (1978) assert: "It is providers' perceptions of demand, vs. actual demand, that determines supply." (p. iii) and "most institutions rely on the personal judgments of individual staff persons and informed conversations among staff as the basis for program decisions." (p. iv)

Boyle and Jahns, in the 1970 AEA Handbook, advise the adult educator to determine needs on the basis of information about potential learners, contemporary social and economic environment, and subject matter.

It is important to keep in mind that needs expressed or felt by learners, community representatives and institutional spokesmen, are an important source of information for institutions desiring to plan a program, but that filters will constantly intervene between the expressed needs and the educational offerings the institution will be able to make. The question of who determines the actual need and the institutional response to that need must be faced in order to make an honest assessment of the decision-making process.

Whose needs?

Three targets of assessment are identified as possible foci for needs assessment. These are learners, providers and communities. Learners are the participants in learning activities. The learners' perspective is not singular. Different learners will look at learning activities in different ways; the concept of need can be expected to differ from one learner to another.

Providers are the persons, groups, organizations, and institutions that offer learning activities for adults. Like that of learners, the providers' perspective is not a singular one. Needs can appear very differently where the provider is the learner himself/herself, a person other than the learner, an informal group, or an educational institution; or, whether learning activities are the primary, secondary, or tertiary purpose of the provider.

Communities are groups defined by some common attribute of their members. The communities' perspective offers multiple ways of looking at needs: from the viewpoint of groups defined on the basis of political boundaries (e.g., towns, cities, counties, states, regions, nations); the viewpoint of demographic-based groups (e.g., rural, urban); or, from the viewpoint of interest-based groups (e.g., private enterprise, unions, professional associations, government, or public services). The community perspectives offer alternative ways in which the needs of learners and providers can be described.

Each of these perspectives can also be viewed as a target for assessment. In other words, in assessing the needs area, "purposes," one would have to target the assessment toward learners or providers or the community, as each may have a different need. A learner's need might be represented by his/her motivation.

The provider's need would be influenced by the role, scope, and mission of the institution. The community's need might be based on social conditions needing improvement.

What needs?

The obvious question is not always the first one to be asked. People have all kinds of needs about which it might be interesting to gather information, but not all of them are pertinent to the postsecondary education community and to the particular institution trying to learn what it should provide to adult learners.

The purposes of the institution will, of course, determine the specific needs to be addressed. The perception of the institutional function, the constraints imposed upon the institution from influences outside it (such as accrediting agencies), the institutional climate for change, and the institution's flexibility, all have an impact on the kinds of needs about which the institution will want information.

Although it has become fashionable to insist that postsecondary education is learner-centered, the actuality of the matter may not bear out this claim. We suggest that, in order to better serve the public, administrators must assess the needs of learners, of the community, and of their own institutions. NCHEMS Handbook of Terminology for Classifying and Describing the Learning Activities of Adults (1978) provides a framework for the detailed description of learners (pp. V-3 - V-4). Many existing surveys have examined learner populations to ascertain the motivations, felt needs, and preferences of adults.

The by-now classic work of Johnstone and Rivera (1965), the Carp, Peterson, & Roelfs (1973) study, and the surveys conducted by states, such as Colorado (1975) are all of this type. Johnson (1967) differentiates among the training needs of the individual, the group, and the organization in his article in the ASTD Handbook. If the learner is to be the focus of adult education programs, understanding learners' needs is of high importance for institutions.

The needs of a community can be seen as the sum of the needs of the learners in it, or as being more than that. McMahon (1970) argues that communities have needs greater than those obtained by adding up individual needs. If one takes a systems approach to community, it is clear that individual needs are an important subsystem of community needs, but cannot be aggregated simply to describe adequately what the needs of the community are. The NCHEMS Handbook (1978) gives detailed descriptors for communities (p. V-3).

An important component of any community is its institutional structure. Within the community, individuals are organized into institutions, organizations, groups, and associations of many kinds. Many individuals belong to more than one such institution. The needs of these institutions are of great importance in assessing community needs. In addition, many of these institutions are themselves providers of educational services to their members and to the community at large. A needs assessment must take the institutional components of the community into consideration.

The needs of the institution performing the assessment must also be taken into account. This means having a clear understanding of the institution--

its goals, purposes, potential for service, facilities, and financial, human, and informational resources. Whether or not it is made explicit, the question of institutional need is at the heart of the assessment any institution makes. Does the institution need to increase its student body? Does it have facilities which are going to waste, and which it needs to find use for? Does it have faculty members it doesn't want to lose, but who are under-utilized? Does it have a mandate from an accrediting institution or some funding body to "do a needs assessment"? Is it undergoing an administrative and philosophical crisis, leading it to reconsider its traditional approach to providing education for adults? A set of descriptors for institutions (providers) is included in the NCHEMS Handbook (1978) (p. V-3 - V-4).

What needs information is required?

The Handbook of Terminology for Classifying and Describing the Learning Activities of Adults identifies the following categories of information, which can be used in identifying needs. Each of these can be related to Learners, Providers, and Communities.

Description includes identification and characteristics.

Purposes are the aims toward which a learning activity is directed. A learner's purpose is an important component of his/her educational needs. Communities and institutions also have purposes which must be understood in order to assess needs.

Content represents the subject matter and subject areas that are reflected in learning activities for adults.

Methods are the ways in which the teaching and learning of adults take place.

Financial resources are the funds needed by learners, communities, and providers in connection with educational activities.

Physical resources include facilities and equipment needed for educational activities.

Human resources are the persons involved in offering learning activities.

Time resources include aspects of time relating to educational activity.

Information resources involve needed information concerning educational activities.

Support Functions are the activities that enable and support activities for teaching and learning. They include governance and policy setting, management, guidance and counseling, testing and placement, research and evaluation, and design and production of learning resources and logistical services.

Outcomes are the planned and unplanned (or intended and unintended) results from a learning activity.

Table V-1 is a representation of needs assessment as a matrix, where needs areas are matched with targets of assessment to identify specific items of information about needs.

As an example of the use of the matrix, we have identified each cell by a combination of letters indicating, first, the initial letter of the name of the row (L, C, or P), and second the initial letter (or letters) of the name of the column (D, P, C, M, FR, PR, HR, TR, IR, SF, O). The cell at the

NEEDS AREAS / TARGETS OF ASSESSMENT	DESCRIPTION	PURPOSES	CONTENT	METHODS	FINANCIAL RESOURCES	PHYSICAL RESOURCES	HUMAN RESOURCES	TIME RESOURCES	INFORMATION RESOURCES	SUPPORT FUNCTIONS	OUTCOMES
LEARNERS	Identification and Characteristics	Basic educ. Occupational Family Civic Leisure and recreation Self-devel. Social devel. Credit and awards	Preferred subject matter	Learning style Individual and Group Methods	Income data: amts., sources. Amount willing to spend; per year, total, etc.	Sites Equipment Collection Supplies	Identification and Characteristics	Time frame Frequency Duration	Awareness of institution; Knowledge of availability costs, etc.	Services desired and desirable	See Purposes
COMMUNITY	Identification and Characteristics	Betterment of social conditions	Subjects needed by groups; Subjects offered by institutions*	How does community solve problems; Methods offered by institutions* Individual & Group Methods	Finances of community; organiz'ns; Economic trends Employers	Needs for kinds of facilities Facility sharing Availability*	Availability* Demographic information Government employees Human resources of business, etc.	When are learning opportunities offered?* Work time frame for most workers	Background information for planning Clearinghouse of community activities MIS	Policy setting Governance Management Logistical services	Social improvement Directory See Purposes
PROVIDERS	Identification and Characteristics	Goals and Objectives; Mission, Scope, and Role	Subjects offered* Universe of possible offerings Others' offerings Desired subjects	Presently used; Desired; Universe of possibilities Individual, Group Methods	Income: Amounts, Sources Expenses: Amounts, Purposes	Inventory* Facility needs	How many?* What kind?* What others needed?	When are learning opportunities offered?* Academic calendar	MIS Information regarding self, other institutions ENTIRE CHART!	Policy setting Governance Management Testing & Placement Research & Evaluation Guidance & Counseling Learning rescs Logistics	See Purposes

*Supply (vs. demand) data

TABLE V-1. MATRIX OF NEEDS ASSESSMENT CATEGORIES OF INFORMATION

upper left corner would therefore be LD: descriptive information about learners.

To examine the usefulness of the matrix, let us assume that we wish to focus on learner needs in the area of content. We are therefore interested in cell LC. Some possible learner needs we might want information about concern subjects for which learners perceive a need or express a preference. Several questions found in instruments collected during this project were aimed at assessing needs in this area.

Table V-2 provide this type of cell-by-cell breakdown for the entire matrix.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LD	Birth and Age	Would you mind telling me your age?	L2
	Sex	Sex of respondent.	L1
	Racial/Ethnic Group	What is the original nationality of your family on your father's side?	L11
	Language Proficiency	Is English your preferred language?	L1
	Handicap Category	Does anyone in your family have: __Mental retardation? __Epilepsy? __Cerebral palsy? __Autism?	L16
	Special assistance needs for handicap	Are you getting help with this problem? (mental handicap)	L16
	Disadvantage status	Is your family income $100. or more a week or is it less than $100. a week?	L30
		What was the last grade or class you completed in school?	L30
	Special assistance needs for disadvantage		
	Citizenship status		
	Location	What University X campus is closest to you?	L11
	Participation in veterans' educational benefits	Have you taken advantage of available veterans' educational benefits?	L40
	Employment status	Are you presently employed?	L1
	Work experience	What type of work do you do?	L1

TABLE V-2. INFORMATION ITEMS AND SAMPLE QUESTIONS FROM INSTRUMENTS ASSOCIATED WITH CELLS FROM TABLE V-1.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LD	Learning preferences	Would getting paid to attend a learning program be important to you?	L1
		If you were attending a session on a topic related to marriage, would you prefer to attend with your (husband/wife) or go alone?	L15
	Educational achievements, awards, and related experiences	What is the highest grade-level of school you have completed?	L1
		Have you ever attended a Continuing Education offering?	L13
	Marital status	What is your marital status?	L1
		How many years have you been married?	L15
	Dependency status		
	Number of dependents	Are there children in your household? What are their ages?	L15
	Financial status	Please tell me which letter best reflects your income: Monthly / Weekly / Daily A. Less than $420 / E. Less than $100 / I. Less than $20 B. $425-835 / F. $105-200 / J. $25-40 C. $840-1250 / G. $205-300 / K. $45-60 D. $1255 up / H. $305 up / L. $65 up	L1
	Veterans' status	What is your military status?	L1
		Veteran status?	L40

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LP	Basic education Occupational Family Civic Leisure and recreation Self-development Social development Credit and Awards Obtain assistance Gain access	I'd like to think again about the thing you'd most like to study. Would you think about it for a minute and then tell me why it would be important for you to study in that subject area?	L2
		For which of the reasons listed on this card are you interested in further learning? Tell me all the reasons you would consider important in your decision to pursue further education. __Meet new people, get away from daily routines, get involved in something new __To work toward a degree __To be better informed __To deal more effectively with personal or family problems __For personal satisfaction __To learn more about how to solve community problems __To improve my income __To prepare for a job __For a job requirement	L3
		Would you like to get credit toward some type of certificate, or diploma, or degree for learning?	L2
		Which of the following reasons best describes the reason you are continuing your education? __To increase my general knowledge __To obtain a promotion in my present line of work __To learn more about community affairs and public issues __To acquire a skill to use for a hobby or in my family life __To improve my skill in a sport or recreation	L6

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LC	Postsecondary Content other than vocational Agriculture and Natural Resources Architecture and Environmental Design Area Studies Biological Sciences Business and Management Communications Computer and Information Science Education Engineering Interdisciplinary Studies Fine and Applied Arts Foreign Languages Health Professions Law Letters Library Science Mathematics Military Sciences Physical Sciences Psychology Public Affairs and Services Social Services Theology Vocational Content Agriculture Distributive Education Health Occupations Home Economics Industrial Arts Office Occupations Technical Education Trade and Industrial Occupations	There are a wide variety of subjects and skills which people might wish to study or learn. If you had your choice, and didn't have to worry about cost, class scheduling, or your normal responsibilities, what subjects or skills interest you enough for you to spend a fair amount of time learning? (List as many as you want.)	L5
		I have here a list of courses that many colleges and community colleges offer regularly (hand card X) Which of these courses do you think you would find most interesting? Any others?	L8
		What general subject area did/would you consider studying? __Vocational/technical __Home and family living __Hobbies and recreation __Personal development __Public affairs __Religion or ethics __General education __Other	

TABLE V-2. Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LM	**INDIVIDUAL METHODS** Independent study Directed study Directed experiential learning Self-directed learning **GROUP METHODS** Class Small group meeting Large group meeting Demonstration Trip/tour Action project Mass media	There are many ways in which people can take a course. How would you prefer to learn, if you could do it any way you wanted? (Examples for interviewer, if needed: lecture, workshops, tutoring, travel-study, on-the-job, correspondence, audio/visual, independent study, group project)	L2
		Whether or not you plan to pursue any further education in the next two years, there are a number of ways people can study or learn. (Show Card X). In view of your work and family commitments, life style, and so forth, which of the ways listed on this card are possible and appropriate for you? __On-the-job training: employer sponsored __On-the-job training: sponsored by union or cooperative __Learning that combines work experience with meetings with an instructor and other students. __Conventional classes during the day at the nearest college campus __Conventional classes during the evening at the nearest college campus __Classes during the day, 5-30 miles from home __Classes during the evening, 5-30 miles from home __Courses using tv or radio, with occasional meetings with your instructor __Courses by newspaper __Independent study or projects, in consultation with an instructor at a convenient time and place __Correspondence study at home __Private lessons __Other	L3

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LM	**INDIVIDUAL METHODS** Independent study Directed study Directed experiential learning Self-directed learning **GROUP METHODS** Class Small group meeting Large group meeting Demonstration Trip/tour Action project Mass media	If you were a student today, which one of the following could the teacher do to give you the most help? __Give interesting presentations __Clearly state the purposes of his teaching __Use many films and media aids __Provide frequent class discussions __Offer practical hands-on experiences	L52
		There are many ways in which people can take a course of study. How would you want to learn this area if you could do it any way you wanted? __Lectures or classes __Short term conferences, institutes, workshops __Individual lessons from a private teacher __Discussion groups, informal book club, or study group __Travel-study program __On-the-job training, internship __Correspondence course __TV or video cassettes __Radio, records, or audio cassettes __Work on a group action project __ Study on my own, no formal instruction __Other	L56

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LPR	Sites	Where would you like to take courses? How far would you be able to travel to take part in a learning activity, assuming that you would have to go there at least once a week?	C6
	Buildings		
	Equipment	When I need or want to go some place, I usually have ___ my own transportation ___ to depend on others ___ to walk or use public transportation	L44
	Collections		
	Supplies		

TABLE V-2, Cont'd.

<table>
<tr><th>Cell Identifier</th><th>Items of information associated with this cell</th><th>Sample item from instrument</th><th>Source</th></tr>
<tr><td>LFR</td><td>Income</td><td>Which numeral indicates the approximate total income for yourself and all others in this household for 197x:
1. 0-4999
2. 5000-9999
3. 10000-14999
4. 15000-19999
5. 20000 and over</td><td>L44</td></tr>
<tr><td></td><td>Expenditures</td><td>If there were a charge for taking a course you wanted, how much would you be willing to pay?</td><td>L2</td></tr>
<tr><td></td><td></td><td>How was your most recent educational activity financed?
<table>
<tr><th></th><th>Employer</th><th>Scholar-ship</th><th>Loan</th><th>Self</th><th>Other</th><th>No Costs</th></tr>
<tr><td>Tuition</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Living Expenses</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Travel</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td><td>L17</td></tr>
</table>

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LHR	Identification of Human Resources		
	Characteristics of Human Resources	Would you be interested in teaching a course?	L26
	Type of Human Resources		
LTR	Time Frame of Activity	If you attend classes/events: What days a week would you attend? Mon.__Tue.__Wed.__Thu.__Fri.__Sat.__Sun.__ Time of day preferred? Morning__Afternoon__Evening__	L26
	Frequency of Activity	How often would you be able to attend a group meeting? __once a week __twice a week __once a month __two times a month __other	L23
	Total Duration of Activity	How many weeks would you like to attend class? __four __six __eight __twelve __sixteen	L26

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LIR	Information about the institution available to the learner	Do you believe an opportunity exists for you to learn the subject you circled earlier, given your location, work and family commitments, etc.? __Yes, I think a course is available such that someone like me could take it. __No, I don't believe a course is available for someone in my circumstances __I don't know if one is available or not	L5
		Can you think of any colleges, whether junior or senior or community colleges, that are in this county?	L25

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LSF	Policy Setting and Governance		
	Management		
	Guidance and Counseling	Would you favor counseling?	C6
	Testing and Placement	Have you or your spouse discussed a family situation with a clergyman, teacher or counselor?	L15
	Research and Evaluation		
	Design and Production of Learning Resources	Would you be more apt to take courses if tutoring and other help were available?	L11
	Logistical Services for Learning Resources	Check the services that are currently available to you, if any: __Lists of books or other relevant materials which could be borrowed __Photocopies of articles mailed on request __Use of a teletype machine to obtain required information __Microfilms of needed information mailed directly to you for a small fee __Shuttle transportation to the university __Instruction in the use of a library and the information resources available to you __Liaison on your behalf between the sponsoring university and local libraries	

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
LO	Basic education Occupational Family Civic Leisure and recreation Self-development Social development Credit and Awards Obtain assistance Gain access	How do you feel about the learning program you participated in? Good ___: ___: ___ Bad Useful ___: ___: ___ Useless Exciting ___: ___: ___ Boring	L1
		In what ways was the program helpful to you? __on the job that I now hold __prepare to change jobs __to get a promotion __carrying out everyday tasks and duties __spend my spare time more enjoyably __meet new and interesting people __get away from the daily routine __become a better informed person	L1
		If you currently have or will be taking a job, to what extend is it related to the major or area of study you are completing at our college?	L60
		What was the most recent certificate or degree you received from our college?	L57

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CD	Type of community	Name of company or firm; address, telephone... What are the main products and/or services provided?	C7
	Location of Community	How would you describe your "home area", the area to which you belong and where you feel at home? How much area does it cover?	C2
		Which of the following best describes your business location? __Rural community __Downtown area __Neighborhood shopping district __Regional shopping center __City industrial district __City outskirts __Other	C8
	Adult Learners in Community	In your organization, what is the approximate number of employees?	C10
		Does your company plan any expansion in the near future?	C11
		Are there many adults in your neighborhood who didn't finish high school or who don't have much money?	C22
	Providers in Community	Does your firm provide its own educational or training program for employees?	C7

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CD	Community problems	Below are listed several problems that may exist in our community. Please rate the 3 that worry you most, with "1" indicating the one which worries you most. __Lack of employment opportunity __Job discrimination __Drug and alcohol abuse __Loneliness __Low grade housing __Crime and delinquency __Not enough recreational opportunities __Not enough cultural opportunities __Not enough educational opportunities and facilities __Family and marital problems __Lack of child care __No information on human services __Poor health __Lack of job training __Lack of transportation Please list other problems that you feel exist in our community:	C4

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CP	Basic education Occupational Family Civic Leisure and recreation Self-development Social development Credit and Awards Obtain assistance Gain access	Are special activities needed to motivate the community to potential educational benefits offered by the College?	C6
		Do you feel that additional education would be helpful to you in operating your business?	C8
		What are some of the most serious future employment problems you see for your company? __high turnover rate __state and federal laws __qualified employees unavailable __higher labor costs __absenteeism __personal employee problems __OSHA regulations	C11
		List the presently unmet educational needs of your organization.	C19

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CC	Postsecondary Content other than vocational Agriculture and Natural Resources Architecture and Environmental Design Area Studies Biological Sciences Business and Management Communications Computer and Information Science Education Engineering Interdisciplinary Studies Fine and Applied Arts Foreign Languages Health Professions Law Letters Library Science Mathematics Military Sciences Physical Sciences Psychology Public Affairs and Services Social Services Theology Vocational Content Agriculture Distributive Education Health Occupations Home Economics Industrial Arts Office Occupations Technical Education Trade and Industrial Occupations	From the programs shown below, please answer YES or NO whether you think the people of City X could benefit from each one listed: PROGRAM YES NO General academic Civic and public affairs education Adult basic education Americanization and citizenship education Fine arts Leisure time activities Business and office education Home economics Consumer education Home improvement education Health and Physical education General personal development Safety Education for the aging	C1
		What types of courses would help solve a particular problem in the X community?	C6
		Of these broad classifications of business operations, please list the three most important to the successful operation of your business: __Accounting __Business law __Finance __Marketing __Production __Personnel Management __Customer relations and Service Policy __Other	C8
		What specific programs do you feel College X should offer that would most benefit your business?	C21

TABLE V-2, cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CM	INDIVIDUAL METHODS Independent study Directed study Directed experiential learning Self-directed learning GROUP METHODS Class Small group meeting Large group meeting Demonstration Trip/tour Action project Mass media	The University has very extensive expertise and the ability to solve many environmental problems. I will read three of the things that the University can help provide. As a leader in your community, which of these would help you most? 1. Research and investigations of environmental problems 2. Advice to the decision makers and community leaders like yourself 3. Education and information for the general public	C3
		Which of the following types of training are provided? __on-the-job training __formal orientation program(s) for new employees __"in-house" courses or learning activities __special courses or learning activities provided under cooperative or contractual arrangements with a local educational institution __other	C7
CHR	Identification of Human Resources	How many people in this neighborhood do you consider your friends?	C2
		Who are some people in the Black community you feel are capable of teaching courses that could be offered at the College?	C6

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CHR	Characteristics of Human Resources	I will read a list of obstacles sometimes encountered when trying to solve environmental problems. For each one, please tell whether it exists to a very major extent, to some extent, or not at all in your city __Lack of qualified leadership in seeking a solution	C3
	Type of Human Resources	Do you think the police treat people fairly in this neighborhood?	C2
		Are there inducements to secure high quality, well-trained teachers?	C5
		Are local needs being met and people attracted to the town from the surrounding area by the availability of: __doctors __dentists? __optometrists? __lawyers? __nurses? __engineers? __architects? __veterinarians?	C5
CPR	Sites	Is there a public park? Kept clean? Well equipped? Supervised? Landscaped?	C5
	Buildings	Do you know where the Court House is located?	C2
	Equipment	Do the schools have adequate library facilities? Satisfactory laboratory facilities? Playground equipment?	C5

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CPR	Supplies		
	Transportation	Are adequate facilities available for transportation?	C5
CFR	Institutional Income and Expenditures	See PFR	
	Learner Income and Expenditures	See LFR	
	Community Income and Expenditures, including Community Economic Aspects	Does X County have adequate employment opportunities?	C2
		Do schools make provision for scholarships?	C5
		Are special financial arrangements made to provide health care for people who cannot afford regular rates? Who absorbs cost of such arrangements?	C5
		Are local taxes fair and reasonable?	C5
		About how much money do the farm people in your area spend in your town per week?	C5
		Does this firm provide financial assistance or reimbursement for tuition and fees to employees enrolled in educational activities?	C7
		In the last two years has the net worth of your business: __increased? __decreased? __no change? __n/a	C8

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CTR	Time Frame of Activity	When should adult education courses be held? __daytime only __evening only __daytime and evening	C1
	Frequency of Activity	How often do you visit with your friends in your neighborhood? Would it be almost every day, 2 or 3 times a week, once a week, every 2 weeks, once a month, less than that, or never?	C2
		How often do you get out of the house: __very often __often __sometimes __Hardly at all __never	C2
	Total Duration of Activity	Please check the number of years your organization has been located in the city: __1-3 years __4-6 years __7-10 years __11-20 years __21 years or more	C10
CIR	Information available to the community	I will read a list of obstacles sometimes encountered when trying to solve environmental problems. For each one, please tell me whether it exists to a very major extent, to some extent, or not at all in your city. A. Lack of public awareness B. Failure to recognize the problem	C3
		Are you aware of the resources available through the Small Business Administration?	C8

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
CSF	Policy Setting and Governance Management Guidance and Counseling Testing and Placement Research and Evaluation Design and Production of Learning Resources Logistical Services for Learning Resources	I could use the following community services: __Health and medical care __Child care __Legal aid __Family counseling or planning __Recreation and social life __"Meals on Wheels" or group meals __Mental health __Youth services __Other __	L44
		What do you think are the three most important things the city government does for the people in the City?	C2
		Is there efficient, cooperative local government?	C5
		Does the community take advantage of every opportunity to promote adult education?	C5
CO	Basic education Occupational Family Civic Leisure and recreation Self-development Social development Credit and awards Learner assistance Learner access	What other types of agencies and/or personnel has your firm utilized for employee/staff training, other than postsecondary institutions? __private consultant __Private education __training resources from your own company system __state/federal personnel __other Were you satisfied with the results of that collaboration?	C11

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PD	**Type of Provider**		
	Control Status of Provider	Government: (check appropriate category) 01 ( ) City library 02 ( ) County " 03 ( ) Township " 04 ( ) City-county library 05 ( ) Multi-county library 06 ( ) Association library 07 ( ) School library 08 ( ) School-pub. " 09 ( ) Other	P16
	Accreditation Status	Is this program accredited by any specialized accrediting agency or agencies? If yes, what agency or agencies have recognized this program? List all which apply.	P2
	Recognition Other than Accreditation		
	Location	Business address Give location of each branch	P2 P17
	Name of		
	Institution	Name of organization	P4
	Unit	Name of course or program	P3
	Enrollment	Approximately how many students (head count) were enrolled in adult/continuing education activities at this institution last year?	P2
	Class Size	What is the approximate or average class size?	P2
	Cooperation	Cooperative or contract affiliations, inter-type library networks, library public agencies, ref. service centers, consortia, etc.	P8
	Staffing	In your organization, what is the approximate no. of employees?	C10

TABLE V- 2 Cont'd

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PP	Basic education Occupational Family Civic Leisure and recreation Self-development Social development Credit and Awards Learner assistance Grant access	What is the general purpose or focus of this program? __occupational skills or techniques __general education or liberal studies __leisure time/recreation activities __personal development __home and family living __public affairs __other	P2
		Please list names of educational training programs with a brief description of program purposes (Examples: reading improvement; management principles for first line supervisors; report writing; improving leadership skills, etc.)	P6
		Are there educational needs in the greater City area that you feel your college should attempt to meet, but is not meeting at the present time?	P20
	Provider support (Maintenance, renewal)		

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PC	Postsecondary Content other than vocational Agriculture and Natural Resources Architecture and Environmental Design Area Studies Biological Sciences Business and Management Communications Computer and Information Science Education Engineering Interdisciplinary Studies Fine and Applied Arts Foreign Languages Health Professions Law Letters Library Science Mathematics Military Sciences Physical Sciences Psychology Public Affairs and Services Social Services Theology Vocational Content Agriculture Distributive Education Health Occupations Home Economics Industrial Arts Office Occupations Technical Education Trade and Industrial Occupations	Check all the areas of content that are emphasized in each program you offer: __Same content as traditional curriculum __Occupational and career orientation __General or liberal studies __Social problems __Recreation or leisure activities __Other	P1
		Please list any suggestion you have as to the curriculum content of an adult education program that would be of particular importance and benefit to your employees--again, keeping in mind the competencies that you feel are likely to significantly increase in importance within your organization in the next 5-10 years.	P24

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PM	INDIVIDUAL METHODS Independent study Directed study Directed experiential learning Self-directed learning GROUP METHODS Class Small group meeting Large group meeting Demonstration Trip/tour Action project Mass media	Principal Learning Option: Which of the above methods constitutes the major means of learning in the program? __Traditional classroom lectures __Tutorial __Programmed instruction __Computer-assisted instruction __Tape cassette instruction __Talk-back telephone instruction __Closed-circuit live talk-back television __Closed-circuit TV or video-tapes with no talk-back __Network radio or television	P1

TABLE V-2, Cont'd.

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PPR	Sites	Principal location of learning activities: __Main campus __Regional learning or extension center __Business or industrial site __Community center, agency, or library __Home __Other	P1
	Buildings	Library capacity: a. Square feet of floor space? b. Shelf capacity? c. Seating capacity?	P11
	Equipment	Bookmobiles operated: a.How many? b.When purchased?	P16
	Collections	Enter number of volumes, reels, discs or other materials: 1. Books added during fiscal year 2. Total volumes held 3. Documents, information file, pamphlet file 4. Microfilm, microfiche, microcard materials 5. Maps and charts 6. Art works available for loan or rent 7. Moving pictures: 16 mm other 8. Audiorecordings: discs tapes	P8
	Transportation	Is public transportation to and from this institution available?	P2
	Supplies		

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PFR	Income	What is the chief source of funding for the adult/continuing education program in your institution?	P3
		What are the characteristics of the service? Fees: 1. For individual counseling 2. For group counseling 3. For group guidance series 4. For tests 5. For test battery	P5
		Financial Statement (See attached sheets for Source P16.)	
	Expenditures	Are adult/continuing education students eligible for financial aid at this institution? Which of the following types of financial aid are available? __loans __scholarships, grants __work-study employment __other	P2

TABLE V-2, Cont'd.

- FINANCIAL STATEMENT -

INCOME

95. Name of city ______________________________

96. Library Mill Levy .... $ ____________
97. General fund appropriation .... $ ____________
98. Personal property replacement fund .... $ ____________
99. Federal revenue sharing fund .... $ ____________
100. Homestead Act Replacement funds .... $ ____________
101. Total .... $ ______________
131. Total Income From Other Public Funds (e.g. CETA)...................... $ ______________
132. Total Income From State Library Grants .... $ ______________

From investments:

134. a. Rent of buildings or parts of them .... $ ____________
135. b. Interest on investments and endowments
(C.D.s, stocks, etc.) .... $ ____________
136. c. Transfer in from investments .... $ ____________
137. Total .... $ ______________

From gift/donations for operating budget:

138. Community Chest & United Fund .... $ ____________
139. Friends of the Library .... $ ____________
140. Association Membership .... $ ____________
141. Individual cash/gifts/donations .... $ ____________
142. Other: ______________________________ .... $ ____________
143. Total from gifts, etc. .... $ ______________

From miscellaneous sources:

144. Fines, fees, etc. .... $ ____________
145. Rental book collection .... $ ____________
146. Sale of publications .... $ ____________
147. Other: ______________________________ .... $ ____________
148. Total cash .... $ ______________

149. Other sources .... $ ______________

151. TOTAL INCOME ... (add lines 101, 131, 132, 137, 143, 148, & 149) .... $ ______________

EXPENDITURES

Salaries & Wages

152. Base Salaries .... $ ____________
153. Social Security .... $ ____________
154. Health Insurance .... $ ____________
155. Retirement Funds .... $ ____________
156. Workmen's Compensation, OASIS .... $ ____________
157. Total .... $ ______________

Fees and Services

158. Travel .... $ ____________
159. Utilities (Heat, Water, Electricity) .... $ ____________
160. Insurance .... $ ____________
161. Postage .... $ ____________
162. Telephone .... $ ____________
163. Book Binding .... $ ____________
164. Other: ____________________________ ...... $ ____________
____________________________ ...... $ ____________
165. Total .... $ ______________

Supplies and Materials

166. Books ....$ ____________
167. Audio-visual (recordings, films) ....$ ____________
168. Periodicals, subscriptions ....$ ____________
169. Microforms ....$ ____________
170. Supplies ....$ ____________
171. Total ....$ ____________

Equipment

172. Audio-visual equipment ....$ ____________
173. Other library equipment ....$ ____________
174. Vehicles ....$ ____________
175. Total .... $ ____________

Construction

176. Land acquisition ....$ ____________
177. Building additions ....$ ____________
178. Building remodeling ....$ ____________
179. Total .... $ ____________

180. Transfer to investment accounts (explain) .... $ ____________

181. TOTAL EXPENDITURES .... $ ____________

SUMMARY

182. Cash on hand, 7/1/76 (excluding investment accounts) $ ____________
183. Total Income (line 151 - Income Section) .... $ ____________
184. Total Operating Fund (add lines 182 and 183) .... $ ____________
185. Total Expenditures (subtract line 181) .... $ ____________
186. TOTAL CASH ON HAND, June 30, 1977 .... $ ____________

Fixed Assets (estimated market value)

187. Land .... $ ____________
188. Building .... $ ____________
189. Equipment & Furniture .... $ ____________
190. Books & Other Library Materials .... $ ____________
191. TOTAL FIXED ASSETS .... $ ____________

192. TOTAL ASSETS AND RESOURCES (add lines 186 and 191) .... $ ____________

ANALYSIS OF CHANGE IN INVESTMENT, SAVINGS, AND SPECIAL ACCOUNTS

193. A. Investment Balance, 7/1/76 .... $ ____________
194. 1. Transfer in from Operating Account (line 180) $ ________
195. 2. Less transfer out to Operating Account (line 136) $ ______
196. B. Net adjustment (1 less 2) .... $ ____________
197. C. Fund balance (A less B), 6/30/77 .... $ ____________

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PHR	Identification of Human Resources	Who makes up the faculty for adult/continuing education learning activities at this institution? __Regular faculty __Separate adult/continuing education faculty __Special faculty (instructors from community, professions, business and industry, arts, etc.)	P2
	Characteristics of Human Resources	Salary Survey (See attached items from Source P9)	
	Type of Human Resources	Enter total number of staff positions budgeted full-time equivalent FTE (not less than 36 hours per week), with subtotal of number working as Librarians and as Library/Media Technical Assistants. Total Librarians L/MTA Students	P8
	Training Needs	Are there any training needs of your staff (paid or volunteer) which you are not now able to meet?	P4

TABLE V-2, Cont'd.

Salary survey, Fiscal Year 1977-78. Enter amounts paid per month, (or compute equivalent monthly payment), for each class appropriate. Report beginning step and final step of range in whole dollars, omit cents. If library has more than one salary range within a single class as defined, report only the highest pay range. Report salary data for September 1, 1977, or specify date that incorporates approved ranges for fiscal year.

		Monthly salary range, whole dollars	
		Beginning step	Final step
19.	Library director.		
20.	Assistant library director, with library-wide responsibilities; a deputy "line" position, not administrative assistant.		
21.	Professional service coordinator; a "staff" position with little or no "line" responsibilities.		
22.	Chief of major library division, supervising other librarians; a professional "line" position.		
23.	Head of a library department, normally under a library division; a professional "line" position, supervising other staff.		
24.	Chief of a branch library, other than central library; a professional "line" position, normally supervising other staff.		
25.	Senior librarian, a journey level professional with one year or more work experience; may or may not supervise other staff.		
26.	Librarian, a beginning professional with library training but normally without previous professional work experience.		
27.	Manager of a special library service, normally not a librarian but frequently a professional in another field; may combine "staff" and "line" responsibilities. Examples: Business manager; Personnel officer.		
28.	Chief of a non-professional library division; a "line" position supervising other staff.		
29.	Journey level non-professional, with one year or more experience, normally working in public service or specialized library tasks. Not clerk-typist.		
30.	Clerk-typist with basic clerical skills and one year or more work experience, not normally working in public service.		
31.	Beginning non-professional employee without library work experience or special training. Not hourly or student paging help.		

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PTR	Time Frame of Activity	When is instruction in this program scheduled? __Daytime __Late afternoon and evening __Weekends __Other	P2
		When are services available at main location? __By appointment? __Drop in? AM PM Eve Mon Tues Weds Thurs Fri Sat Sun	P5
	Frequency of Activity	This course if offered: __Regularly __As needed	P3
	Total Duration of Activity	Length of course: Total number of weeks:	P4

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PIR	Information available to provider; ways of disseminating information about provider	In your opinion, should there be a major marketing/recruitment effort made by the consortium? If so, how do you think it should be organized? __district-wide coordination from administrative center __separate college coordination __district ad hoc task force coordination __other	P20
		What type(s) of information would be most helpful to this institution in making decisions about and/or implementing adult/continuing education - learning activities?	P2

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PSF	Policy Setting and Governance Management Guidance and Counseling Testing and Placement Research and Evaluation Design and Production of Learning Resources Logistical Services for Learning Resources	The following are services provided by colleges. How would you evaluate these services as provided by our college? I did not know about this service I knew about this service but did not use it I used this service; was satisfied I used this service; was not satisfied 1 2 3 4 Admissions Registration Business office Academic advising Guidance, counseling, and testing Reading, writing, math, study-skills Tutoring Minority affairs College cultural programs Recreation and athletic programs Financial and student employment Career planning Job placement Housing services Cafeteria Health services Library Child care Bookstore Parking Campus security Other	L58

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PSF	Policy Setting and Governance Management Guidance and Counseling	Recruitment: What are the major means used to recruit older students and other potential students? __Special literature __Special facilitating services __Special newspaper or broadcast ads __Industrial, professional, military contacts __State employment agencies __Employment counselors, welfare offices __Churches, etc.	P1
	Testing and Placement Research and Evaluation	Educational counseling: How frequent is academic and educational advisement and counseling? __Primarily at enrollment and registration __Occasionally between registration periods __Intensive and continual throughout the program __Other	P1
	Design and Production of Learning Resources Logistical Services for Learning Resources	Admissions restrictions: Please check all criteria used: __Minimum age __Sex __Ethnic background __Low socioeconomic background __High school diploma or equivalent __Must have completed some prerequisites and/or specific training before enrolling __Meets state education code requirement __Satisfactory scores on standardized exams __Certain rank in high school class __Other	
		Child care: Does your institution provide child care for students' children during classes and study hours?	P1
		Policies regarding award and acceptance of credit: See part III of P1 attached	

Table V-2, Cont'd.

POLICIES REGARDING THE AWARD AND ACCEPTANCE OF CREDIT FOR ALL UNDERGRADUATES

The Iowa Higher Education Facilities Commission needs information on activities deemed by your institution to be academically "creditable" for *all of your undergraduate degrees*. (43 institutions responded)

37. CREDITABLE ASSESSMENTS AND EXPERIENCE: Please check *each* of the kinds of assessments and experience for which your institution *actually awards* course credit to undergraduates.

69.8 Advanced Placement Program examinations

9.3 CEEB Achievement Tests or ACT tests

88.4 CLEP (College-Level Examination Program of CEEB)

16.3 Cooperative Test Services (ETS) or Cooperative Foreign Language Tests

18.6 Testing programs in the professions (Nursing, office management, etc.)

81.4 Credits awarded by other colleges or universities for passing standardized tests such as the above

Other standardized external examinations (please specify)

INSTITUTIONAL ASSESSMENTS:

55.8 Institutional proficiency or equivalency examinations

14.0 End-of-course tests without course enrollment

51.2 Special departmental tests

11.6 Oral examinations or interviews

Other institutional assessment (please specify)

NON-COURSE WORK (Possibly credited through independent study):

23.3 Volunteer work in community agency

7.0 Classes at local free university or local experimental college

9.3 Student body officer or active participant in institutional governance

11.6 Participant in local community theater, orchestra, or civic activity

BEST COPY AVAILABLE

2.3 Sensitivity training or encounter group experience

11.9 A completed work (book, piece of sculpture, patent, etc.)

60.5 Military courses recommended for credit by the Commission on Accreditation of Service Experience (CASE)

25.6 Formal courses of instruction conducted by business, industry, or government agencies

41.9 Course work completed at an *unaccredited* college

31.2 Cooperative work experience

20.9 Study abroad sponsored by groups other than educational institutions

4.7 Unsupervised foreign travel

Other (please specify)

38. LIMITS ON CREDIT BY EXAMINATION: How much credit is allowed toward a degree through examination only? (33)

9.1 No credit awarded for examinations alone

3.0 Less than one quarter or one semester's full-time credit

12.1 Not more than one quarter or one semester's full-time credit

51.5 Not more than one year's full-time credit

18.2 More than one year's full time credit is possible, but some course attendance required

6.1 No limit: possible to earn undergraduate degree *entirely* by examination

Other (please specify)

39. ENCOURAGEMENT OF CREDIT BY EXAMINATION: Please check any ways your institution encourages students to earn credit by examination. (43)

53.5 No real encouragement to earn credit by examination

41.9 Wide publicity that the institution awards credit by examination

40. FEES FOR EXAMINATIONS: If students can earn credit by taking end-of-course exams without having enrolled in the courses or by taking special departmental tests, what fees are charged for these examinations? (36)

25.0 No credits permitted to be earned this way

8.3 No fees

55.6 Examination fee to cover the cost of providing the test

8.3 "Recording" fee to record credits on transcript

2.8 Fee *equivalent* to the fee for the credits granted

0.0 Fee *greater than* the fee for the credits granted

Other (please specify)

BEST COPY AVAILABLE

41. CREDIT FOR PRIOR WORK EXPERIENCE: Please check whether any of the following four students would ordinarily receive any credit for their work experience *without* having to take a special examination or test. (43)

9.3 A 25-year-old student with two years' experience in the Peace Corps or Vista

14.0 An older man with ten years' investment counseling experience

14.0 A middle-aged wife with five years' volunteer social-worker experience

7.0 A sophomore who dropped out of another college after his freshman year and worked in a newspaper office for a year

42. RESIDENCY REQUIREMENT: What is the usual minimum amount of resident work that an undergraduate must complete at your institution to earn an undergraduate degree? (42)

4.8 No residency required

40.5 Less than one academic year's work or less than 30 semester hours' credit

45.2 One academic year's work or 30 semester hours' credit

9.5 More than one academic year's work or more than 30 semester hours' credit

43. MEANS OF SHORTENING THE PROGRAM: How can a student receive a degree in a reduced length of time? (Check all that apply.) (42)

11.9 Not possible

73.8 Year-round attendance with no reduction in credits

76.2 Heavier student course load with no reduction in credits

78.6 Credit by examination with no reduction in credits

0.0 Reduced number of credits in a revised curriculum (please indicate the number of credits required in this curriculum)

Other (please specify)

BEST COPY AVAILABLE

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
PO	Basic education Occupational Family Civic Leisure and recreation Self-development Social development Credit and Awards Learner assistance Give access	My company/organization has worked with __College A __College B __College C __Other Were you satisfied with the results of that collaboration?	C11
	Provider support (Maintenance, Renewal)		

TABLE V-2, Cont'd.

Cell Identifier	Items of information associated with this cell	Sample item from instrument	Source
△	Information for interviewer, including instructions	See attached item from Source C3	
		Person who supplied information for this part of survey	P2
		Ask the following question and use the space provided to make notes regarding the answer given. Then ask the organization representative if he or she can help you organize the information under the headings provided.	P4
	Comments on the questionnaire or interview itself	How do you feel about answering these questions? Why?	C6

TABLE V-2, Cont'd.

Project P-657
March 1974

University of Wisconsin-Extension
Wisconsin Survey Research Laboratory

Cover Sheet

ENVIRONMENTAL CONCERNS SURVEY

Interviewer: ______________________________ Your Int. #: ______________

RECORD OF CALLS

Call Number	Date	Hour	Result of Call
1			
2			
3			
4			
5			
6 or more			

NON-INTERVIEW INFORMATION

_______ Refusal

_______ Incorrect address

_______ Incorrect phone numbers

_______ Never able to reach

Other (explain) ______________________

____

Exercise:

In the needs assessment process you are about to undertake:

Who will determine need?

- Members of your institution's governing board
- Your institution's executive officer (e.g., president, chancellor)
- Institution-wide administrators
- Division chairpersons
- Department chairpersons
- Faculty
- Adults in the community
- Community leaders
- Others

About whose needs will you seek information?

- Learners
  - All learners?
  - What segments of the learner universe?
- Community
  - What segments?
- Provider
  - What parts of the institution?

Given the objectives for your study and using the needs assessment matrix, identify the targets of assessment and the needs areas on which you want needs information. Identify which cells will be expanded upon in your activity.

Using Tables V-1 and V-2, find the cell(s) upon which you want to focus your assessment. See if any of the items from existing instruments is suitable.

VI. SOURCES OF INFORMATION

Where is information to be found about the needs you want to assess? Having identified what needs and whose needs you want to know more about, the administrator next must ask what is the best source of information about those needs. For purposes of this information system, let us say that there are two kinds of sources of information: primary sources and existing sources.

Primary sources are, for our purposes, always people. A primary source is a person who can give a report about some needs information. The person may be a learner (past, present, or potential), a provider, a member of a group, agency, or community, or an official representative of a group, agency or community. The person who is a primary source must come into direct contact with an agent of the needs-assessing institution, rather than with some other agency. Methods of needs assessment which involve the collection of items of information directly use primary sources. Primary sources are treated in greater detail in the section Collecting and Compiling Information.

Existing Sources

Existing sources are books, records, statistical tables, reports, and the like. Methods of needs assessment which use them involve compilation of information. These sources are often overlooked. It is worthwhile to attempt to identify existing information before setting out to collect items which may already be available.

Kinds of Sources. Some existing sources identified from the literature and interviews are:

- institutional records
  - entrance test scores
  - grades
  - demand data
  - student rating data
  - locally-conducted studies
- studies reported in the literature
- census data
- BLS and other federally-collected data
- community planning surveys
- surveys by other community agencies
- information systems of state licensing agencies
- state and regional agencies

One excellent guide to federal government statistical publications is the American Statistics Index, published by the Congressional Information Service. The Index can be searched by subject and contains excellent abstracts of statistical publications. For example, this is the entry for NCES' Report, Noncredit Activities in Institutions of Higher Education, 1976.

4648
NATIONAL CENTER FOR EDUCATION STATISTICS: ADULT AND VOCATIONAL EDUCATION

Special and Irregular Publications

4648-7 **NONCREDIT ACTIVITIES IN INSTITUTIONS OF HIGHER EDUCATION For the Year Ending June 30, 1976**
1978. vi+38 p.
NCES 78-344. GPO $1.60.
ASI/MF/3
S/N 017-080-01841-1.
•HE19.302:Ad9/2.

By Florence B. Kemp. Report on the number of noncredit registrations in adult and continuing education courses offered by higher education institutions, 1975/76 with selected data for 1967/68. Based on the 11th annual Higher Education General Information Survey (HEGIS).

Includes 10 tables showing number of institutions with and without programs, by administrative division; and number of registrations, by field of study. Data are shown for public and private universities and 4-year and 2-year colleges.

A previous report covered 1967/68. For description of the latest of the 3 parts published, see ASI First Annual Supplement under this number.

The retrospective edition of the ASI is the 1974 one, which contains all statistical publications in print as of January 1, 1974, as well as significant publications of the 1960's. The Index is updated by annual and monthly supplements. The user of the ASI must then go to the sources indexed to find the actual tables. The publications can be found in depository libraries throughout the U.S.

Another tool which is updated regularly is the American Council on Education's Fact Book on Higher Education (Washington, DC; ACE, 1958 -). This is a good example of compiling information from existing sources. The ACE staff presents actual tables from government and private sources and also prepares certain tables by calculating figures from other tables. The Fact Book is issued in four annually-updated parts: Demographic and Economic Data; Enrollment Data; Institutions, Faculty and Staff, and Students; and Earned Degrees.

A third tool is also a source book referring the user to original sources, public and private. This is Malcolm C. Hamilton's Directory of Educational Statistics, a Guide to Sources (Ann Arbor, MI: Pierian Press, 1974). A brief annotation and publishing history is included for each of ninety-nine statistical publications.

An excellent guide to information sources about communities is Yeuell Harris' Community Information in Education: a Guide for Planning and Decision Making (Washington, DC: NCES, in press). Chapters 4 and 5 of this handbook deal with obtaining information about communities from federal and local sources. Although the Guide is targeted at K-12 administrators, these chapters are of general value. The enclosed excerpts from the third draft (not yet published) can demonstrate the value of this material.

"Census Data

The major source of available published data on population is the Bureau of the Census. The Bureau has conducted a census every ten years since 1790. Beginning in 1980, the Census will be taken every five years. The Census also conducts a monthly Current Population Survey that is usually a large sample survey dealing with some specific subject such as reasons for moving, school enrollment, voter characteristics, or educational attainment. Based on these data collection efforts, the Bureau of the Census publishes the following series of printed reports (U.S. Bureau of the Census, Census of Population: 1970 GENERAL POPULATION CHARACTERISTICS, Final Report PC (1), U.S. Government Printing Office, Washington, DC, 1971).

Population Census Reports

Volume 1. CHARACTERISTICS OF THE POPULATION. This volume consists of 58 "parts" - number 1 for the United States, numbers 2 through 52 for the 50 States and the District of Columbia in alphabetical order, and numbers 53 through 58 for Puerto Rico, Guam, Virgin Islands, American Samoa, Canal Zone, and Trust Territory of the Pacific Islands, respectively. Each part, which is a separate clothbound book, contain four chapters designated as A, B, C, and D. Each chapter (for each of the 58 areas) was first issued as an individual paperbound report in four series designated as PC(1) A,B,C, and D respectively. The 58 PC(1)-A reports were specially assembled and issued in a clothbound book, designated as Part A.

Series PC(1)-A NUMBER OF INHABITANTS. Final official population counts are presented for States, counties by urban and rural residence, standard metropolitan statistical areas (SMSA's), urbanized areas, county subdivisions, all incorporated places, and unincorporated places of 1,000 inhabitants or more.

Series PC(1)-B GENERAL POPULATION CHARACTERISTICS. Statistics on age, sex, race, marital status, and relationship to head of household are presented for States, counties by urban and rural residence, SMSA's, urbanized areas, county subdivisions, and places of 1,000 inhabitants or more.

Series PC(1)-C GENERAL SOCIAL AND ECONOMIC CHARACTERISTICS. Statistics are presented on nativity and parentage, State or county of birth, Spanish origin, mother tongue, residence 5 years ago, year moved into present house, school enrollment (public or private), years of school completed, vocational training, number of children ever born, family composition, disability, veteran status, employment status, place of work, means of transportation to work, occupation group, industry group, class of worker, and income (by type) in 1969 of families and individuals. Each subject is shown for some or all of the following areas: States, counties (by urban, rural-nonfarm residence), SMSA's, urbanized areas, and places of 2,5000 inhabitants or more.

Series PC(1)-D DETAILED CHARACTERISTICS. These reports cover most of the subjects shown in Series PC(1)-C, above, presenting the data in considerable detail and cross-classified by age, race, and other characteristics. Each subject is shown for some or all of the following areas: States (by urban, rural-nonfarm, and rural-farm residence), SMSA's, and large cities.

VOLUME II. SUBJECT REPORTS. Each report in this volume, also designated as Series PC(2) concentrates on a particular subject. Detailed information and cross-relationships is generally provided on a national and regional level; in some reports, data for States or SMSA's is shown. The characteristics covered include national origin and race, fertility, families, marital status, migration, education, unemployment, occupation, industry, and income.

Housing Census Reports

VOLUME I. HOUSING CHARACTERISTICS FOR STATES, CITIES, AND COUNTIES. This volume consists of 58 "parts" - number 1 for the United States, numbers 2 through 52 for the 50 States and the District of Columbia in alphabetical order, and numbers 53 through 58 for Puerto Rico, Guam, Virgin Islands, American Samoa, Canal Zone, and Trust Territory of the Pacific Islands, respectively. Each part, which is a separate clothbound book, contains two chapters designated as A and B. Each chapter (for each of the 58 areas) was first issued as an individual paperbound report in two series designated as HC(1)-A and B respectively.

Series HC(1)-A GENERAL HOUSING CHARACTERISTICS. Statistics on tenure, kitchen facilities, plumbing facilities, number of rooms, person per room, units in structure, mobile home, telephone, value, contract rent, and vacancy status are presented for some or all of the following areas: States (by urban and rural residence), SMSA's, urbanized areas, places of 1,000 inhabitants or more, and counties.

Series HC(1)-B DETAILED HOUSING CHARACTERISTICS. Statistics are presented on a more detailed basis for the subjects included in the HC(1)-A reports, as well as on such additional subjects as year moved into unit, year structure built, basement, heating equipment, fuels, air conditioning, water and sewage, appliances, gross rent, and ownership of second home. Each subject is shown for some or all of the following areas: States (by urban, rural-nonfarm, and rural-farm residence), SMSA's, urbanized areas, places of 2,500 inhabitants or more, and counties.

VOLUME II. METROPOLITAN HOUSING CHARACTERISTICS. These reports, also designated as Series HC(2), covers most of the 1970 census housing subjects in considerable detail and cross-classification.

There is one report for each SMSA and its central cities and places of 50,000 inhabitants or more, as well as a national summary report.

VOLUME III. BLOCK STATISTICS. One report, under the designation Series HC(3), was issued for each urbanized area showing data for individual blocks on selected housing and population subjects. The series also includes reports for the communities outside urbanized areas that have contracted with the Census Bureau to provide block statistics from the 1970 census.

VOLUME IV. COMPONENTS OF INVENTORY CHANGE. This volume contains data on the disposition of the 1960 inventory and the source of the 1970 inventory, such as new construction, conversions, mergers, demolitions, and other additions and losses.

Cross-tabulations of 1970 and 1960 characteristics for units that have not changed and characteristics of the present and previous residence of recent movers are also provided. Statistics are shown for 15 selected SMSA's and for the United States.

VOLUME V. RESIDENTIAL FINANCE. This volume presents data regarding the financing of privately owned nonfarm residential properties. Statistics are shown on amount of outstanding mortgage debt, manner of acquisition of property, homeowner expenses, and other owner, property, and mortgage characteristics for the United States and regions.

VOLUME VI. ESTIMATES OF "SUBSTANDARD" HOUSING. This volume presents counts of "substandard" housing units for counties and cities, based on the number of units lacking plumbing facilities combined with estimates of units with all plumbing facilities but in "dilapidated" condition.

VOLUME VII. SUBJECT REPORTS. Each report in this volume concentrates on a particular subject. Detailed information and cross-classifications is generally provided on a national and regional level; in some reports, data for States or SMSA's is also shown. Among the subjects covered are housing characteristics by household composition, housing of minority groups and senior citizens, and households in mobile homes.

Joint Population-Housing Reports

Series PHC(1). CENSUS TRACT REPORTS. This series contains one report for each SMSA, showing data for most of the population and housing subjects included in the 1970 census.

Series PHC(2). GENERAL DEMOGRAPHIC TRENDS FOR METROPOLITAN AREAS, 1960 TO 1970. This series consists of one report for each State and the District of Columbia, as well as a national summary report, presenting statistics for the State and for SMSA's and their central cities and constituent counties. Comparative 1960 and 1970 data are shown on population counts by age and race and on such housing subjects as tenure, plumbing facilities, value, and contract rent.

Computer Summary Tapes

The major portion of the results of the 1970 census are produced in a set of six tabulation counts. To help meet the needs of census users, these counts were designed to provide data with much greater subject and geographic detail than it is feasible or desirable to publish in printed reports. The data so tabulated are generally available - subject to suppression of certain detail where necessary to protect confidentiality - on magnetic computer tape, printouts, and microfilm, at the cost of preparing the copy.

First Count: Source of the PC(1)-A reports; contains about 400 cells of data on the subjects covered in PC(1)-B and HC(1)-A reports and tabulated for each of the approximately 250,000 enumeration districts in the United States.

Second Count: Source of the PC(1)-B, HC(1)-A, and part of the PHC(1) reports; contains about 3,5000 cells of data covering the subjects in these reports and tabulated for the approximately 35,000 tracts and 35,000 county subdivisions in the United States.

Third Count: Source of the HC(3) reports; contains about 250 cells of data on the subjects covered in the PC(1)-B and HC(1)-A reports and tabulated for approximately 1,500,000 blocks in the United States.

Fourth Count: Source of the PC(1)-C, HC(1)-B, and part of the PHC(1) reports; contains about 13,000 cells of data covering the subjects in these reports and tabulated for the approximately 35,000 tracts and 35,000 county subdivisions in the United States; also contains about 30,000 cells of data for each county.

Fifth Count: Contains approximately 800 cells of population and housing data for 5-digit ZIP code areas in SMSA's and 3-digit ZIP code areas outside SMSA's; the ZIP code data are available only on tape.

Sixth Count: Source of the PC(1)-D and HC(2) reports; contains about 260,000 cells of data covering the subjects in these reports and tabulated for States, SMSA's, and large cities.

The tapes are generally organized on a State basis. To use the First Count and Third Count tapes, it is necessary to purchase the appropriate enumeration district and block maps.

The term "cells", used here to indicate the scope of subject content of the several counts, refers to each figure of statistic in the tabulation for a specific geographic area. For example, in the Third Count, there are six cells for a cross-classification of race by sex: three categories of race (white, Negro, other race) by two categories of sex (male, female). In addition to the above-mentioned summary tapes, the Census Bureau has available for purchase certain sample tape files containing population and housing characteristics as shown on individual census records. These files contain no names or addresses, and the geographic identification is sufficiently broad to protect confidentiality. There are six files, each containing a 1 percent national sample of persons and housing units. Three of the files are drawn from the population covered by the census 15 percent sample and three from the population in the census 5 percent sample. Each of these three files provide a different type of geographic information. One identifies individual large SMSA's and, for the rest of the country, groups of counties; the second identifies individual States and, where they are sufficiently large, provides urban-rural and metropolitan/non-metropolitan detail; and the third identifies State groups and size of place, with each individual record showing selected characteristics of the person's neighborhood.

Current Population Survey Reports

The list below is an example of some that are available:

Series P-20	Population Characteristics
Series P-23	Special Studies
Series P-25	Population Estimates and Projections Generated by th the Bureau of Census -Revenue Sharing Estimates Program (P-25) Population, 1970 and 1973, and Related Per Capita Income (PCI) for Revenue Sharing Areas
Series P-26	Current Population Reports -Federal State Cooperative Program (P-26/25) County Estimates Every Year
Series H-150	Annual Housing Survey

County and City Data Book

This volume is periodically produced as a supplement to the Statistical Abstract, and contains summary data from a wide variety of sources, including the Census and Current Population Reports. This is an excellent source of population and economic data for counties, SMSA's, and cities. Table 4-1 shows the data obtainable directly from the County and City Data Book.

A catalog of Bureau of the Census publications, issued quarterly, is available from the Government Printing Office.

Table 4-2 gives the table references for Bureau of the Census sources of population basic imput data. To use the table, simply select the units desired (county, city or Census tract) from the column headings and follow down the column for instructions on where to find the basic input data in the left-most column.

If school districts or attendance areas are the areal units to be used, see this chapter for a description of a system which can be used to convert Census units to school units.

Table 4-1

Basic Input Data Available From The County and City Data Book, 1972

Data Element		Counties Table 2 Column	Cities Table 6 Column
(01. 01 01)	Total Population	3	303
(01. 01 04)	Median Age	15	313
(01. 01 02 01)	Percent Increase or Decrease	5	305
(03. 01 01)	Land Area	1	301
(01. 01 03)	Population Density	4	304
(01. 03 01 01)	Percentage Foreign Born	18	316
(01. 01 05)	Median Family Income	58	361
	Percentage with Family Income $12,000 and Over[1]	55&56&57	358&359&360
(01. 05 03 01) (01. 05 03 02)	Percentage with Family Income Under $3,000	52	354
(01. 01 06)	Median Highest Grade of School Completed	24	323
(04. 07 01)	Total School Enrollment	28&29	328&329
(01. 06 02 01) (01. 06 02 02)	Percentage Completing Less than 5th Grade	25	324
(01. 07 04 01)	Percent Persons Living in Single Unit Structures	80	379
(01. 07 07)	Median Value of Owner Occupied Units	88	387
(01. 07 09)	Median Monthly Gross Rental of Rented Units	89	388
(01. 07 11)	Number of Housing Units	77	376
(01. 07 06 01)	Percentage Persons Living in Owner-Occupied Units	87	386
(01. 08 01 01)	Crude Birth Rate	21	320
(01. 08 02 01)	Crude Death Rate	22	321

---

[1] This category is calculated by summing (01. 05 03 06), (01. 05 03 07), (01. 05 03 08), and (01. 05 03 09).

Table 4-2

Sources for Census Data on Population

		County		City				Census Tract
Basic Data Item Number	Title	Series PC(1) -A -B -C	County & City Data Book, Table 2	Series PC(1)-A, -B, -C		County & City Data Book, Table 6		Series PHC(1)
				Data For Places 10-50,000	Data For Cities 50,000 or more			
01. 01 01	Total Population	-A, Table 24.	Column 3	28	-A, Table 6	Column 201		Table P-1
	Age-Sex-Specific Population	-B, Table 35.	-NA-	28	-B, Table 24	-NA-		Table P-1
01. 01 04	Median Age[1]	-B, Table 35.	Column 15	28	-B, Table 24	Column 313		Compute from Table P-1[1]
03. 01 01	Land Area	-A, Table 2	Column 1	-NA-	-NA-	Column 301		-NA-
01. 02 05	White Population	-B, Table 35	Column 9	28	-B, Table 24	Column 307		Table P-1
01. 03 01	Foreign Born Population	-C, Table 119	-NA-	102	-C, Table 81	-NA-		Table P-2
01. 01 05	Median Family Income	-C, Table 124	Column 58	107	-C, Table 89	Column 361		Table P-4
01. 05 01	Families With Income	-C, Table 124	Column 52-57	107	-C, Table 89	Column 354-360		Table P-4
	Families With Income Over $12,000[2]	-C, Table 124	55+56+57	107	-C, Table 89	358+ 359+360		Table P-4
01. 05 03 01 01. 05 03 02	Families With Income Under $3,000	-C, Table 124	Column 52	107	-C, Table 89	Column 354		Table P-4
01. 01 06	Median Highest Grade of School Completed	-C, Table 120 (by sex only)	Column 24	103	-C, 83 (by sex only)	Column 323		Table P-2
04. 07 01	Total School Enrollment	-C, Table 120	Column 28+29	103	-C, Table 83	Column 328+329		Table P-2
01. 06 01 07 01. 06 01 08	College Graduates	-C, Table 120	Column 27	103	-C, Table 83	Column 326		Table P-2
04. 07 01 01	School Enrollment Grades K-8	-C, Table 120	Column 28	103	-C, Table 83	Column 328		Table P-2
04. 07 01 02	School Enrollment Grades 9-12	-C, Table 120	Column 29	103	-C. Table 83	Column 329		Table P-2
01. 06 01 01 01. 06 01 02	Population Completing Less Than 5th Grade	-C, Table 120	Column 25	103	-C, Table 83	Column 324		Table P-2
04. 07 02 02	Public Enrollment Grades K-8	-C, Table 120	-NA-	103	-C, Table 83	-NA-		Table P-2
04. 07 02 03	Public Enrollment Grades 9-12	-C, Table 120	-NA-	103	-C, Table 83	-NA-		Table P-2
04. 07 05	Adult Education Enrollment	-NA-	-NA-	-NA-	-NA-	-NA-		Table P-2

---

[1] See Appendix for example of median computations.

[2] This category is calculated by summing (01. 05 03 06), (01. 05 03 07), (01. 05 03 08), and (01. 05 03 09).

BEST COPY AVAILABLE

Titles of Tables from Series PC(1)

-A, Table 24.	Population of counties: 1970 and 1960.
-A, Table 6.	Population of all incorporated places and of unincorporated places of 1,000 or more: 1960 to 1970.
-B, Table 20.	Age by race and sex, for areas and places: 1970.
-B, Table 35.	Age by race and sex, for counties: 1970
-C, Table 81.	Ethnic characteristics for areas and places: 1970.
-C, Table 83.	Educational characteristics for areas and places: 1970.
-C, Table 89.	Income in 1960 of families, unrelated individuals and persons for areas and places: 1970.
-C, Table 119.	Social characteristics for counties: 1970.
-C, Table 120.	Educational and family characteristics for counties: 1970.
-C, Table 124.	Income and poverty status in 1969 for counties: 1970.

Every item necessary to produce the entire array of data on population suggested in this handbook is contained in either Volume I of the *Census*, Series PC(1), the *County and City Data Book*, or the joint *Population-Housing Reports* Series PHC(1). The single exception is adult education enrollment, which must be obtained from local sources.

The main difficulty that may be encountered in using Census data is a lack of correspondence between the units used by the Bureau of the Census (county, census tract) and those used by the schools (school attendance area, school district). This problem can be partially offset, however, by utilizing the program for translating data by census units into data for school units described in the first part of this chapter.

APPENDIX 4

ASSISTANCE IN OBTAINING AND USING CENSUS BUREAU DATA AND PRODUCTS

DATA USER SERVICES

Census Bureau specialists are available to answer inquiries and provide consultation on data products and services by phone, correspondence, or personal visit.

The Census Bureau also offers seminars, workshops, and training courses to inform users of available products and how they can be used.

Data users may also purchase machine-readable data files and computer programs, maps and geographic products, microfiche and microfilm and printouts prepared from data files directly from the Census Bureau.

For further information and assistance regarding Census Bureau programs or products contact:

Data User Services Division
Bureau of the Census
Washington, D.C. 20233
Telephone: (301) 763-2400

REGIONAL USER SERVICES

The Census Bureau's 12 regional offices also offer a variety of services to users of census data. Data user services officers can answer inquiries about census publications and other Bureau products, conduct workshops, and make presentations to groups interested in the statistical programs and products of the Bureau. A library of Census Bureau publications is maintained in each office for users. The Census Bureau's regional offices are listed on the following page.

CENSUS BUREAU REGIONAL OFFICES

ATLANTA, GA 30309
1365 Peachtree St., N.E.
Tel. (404) 881-2274

BOSTON, MA 02116
441 Stuart Street
Tel. (617) 223-0668

CHARLOTTE, NC 28202
230 South Tryon St.
Tel. (704) 372-0711 Ext. 351

CHICAGO, IL 60604
55 E. Jackson Blvd.
Tel. (312) 353-0980

DALLAS, TX 74242
1100 Commerce St.
Tel. (214) 749-2394

DENVER, CO 80225
575 Union Blvd.
Tel. (303) 234-5825

DETROIT, MI 48226
231 W. Lafayette
Tel. (313) 226-4675

KANSAS CITY, KS 66101
4th and State Streets
Tel. (816) 374-4601

LOS ANGELES, CA 90049
11777 San Vicente Blvd.
Tel. (213) 824-7291

NEW YORK, NY 10007
26 Federal Plaza
Tel. (212) 264-4730

PHILADELPHIA, PA 19106
600 Arch St.
Tel. (215) 597-8314

SEATTLE, WA 98109
1700 Westlake Ave., North
Tel. (206) 399-7080

DEPARTMENT OF COMMERCE DISTRICT OFFICES

Other good sources of help in finding census information are the U.S. Department of Commerce district and "satellite" offices located in most large cities. Each office maintains a reference collection of census reports as well as current reports for sale to the public. Check the white pages of your phone directory under "U.S. Government-Commerce, Department of" for the phone number of the nearest office.

LIBRARIES

More than 1,200 selected libraries throughout the country have been designated as "Federal depository libraries." These libraries maintain varying collections of U.S. Government publications including Census Bureau reports. In addition, the Census Bureau furnishes copies of its reports to a selected group of libraries designated as "Census depository libraries." These libraries have most of the Census reports needed to obtain basic data for educational planning and decision making. Other libraries may also maintain selected census volumes, and any library can obtain any census report through interlibrary loan. A list of Federal depository libraries is available from the Government Printing Office (GPO) or from the Data User Services Division.

MACHINE-READABLE PRODUCTS

Machine-readable products are described on p. 90 in this handbook.

Special tabulations can be prepared from existing data files for specific geographic or subject matter areas. These are done at user cost and are reviewed to make sure no individual information is disclosed.

For information regarding special tabulations or for assistance in obtaining and using Census Bureau machine-readable products, contact the Data User Services Division, telephone (301) 763-2400. The Data User Services Division can also provide a list of organizations known as Summary Tape Processing Centers, both public and private groups that have certain data files available.

WRITTEN RECORDS AS A SOURCE OF LOCAL INFORMATION

Organizations that often collect community information and examples of the kinds of information they collect that school districts might need are listed below.

Public Sources	Examples of Kinds of Information Available
Police...........................	Crime statistics
Fire Department..................	High risk areas
City/County/Regional Planning Agency..........................	Demographic Economic Transportation
City/County Highway and Traffic Safety..........................	Traffic patterns
City/County Zoning...............	Codes on residential, industrial and business development
Board of Education...............	District enrollment, Number of pupils on free or reduced school lunches
Bureau of State Employment Security Agency................	Unemployment statistics, Job opportunity areas
City or County Health Department.	Health services, FDC statistics
Recreation and Parks.............	Recreational facilities, Profile of community users

Public Sources (cont'd)	Examples of Kinds of Information Available
Finance and Taxation	Tax levys, tax base, Property tax statistics
Local and State Courts	Juvenile delinquency rates
Motor Vehicles Registrar	Number of automobiles
Public Libraries	Lists of community organizations
Private Sources and Industrial	
Utility Companies	Community profiles. Projections of population growth and industrial development
United Way Agencies	List of community social services, organizations, information and referral
Local Transit Company or Authority	Commuter patterns, In and out migration into cities
Chamber of Commerce	Potential industrial development, Tourism, Economic Trends

U. S. BUREAU OF CENSUS RECORDS AS A SOURCE OF LOCAL INFORMATION

While Census sources for population and economic data will usually be the easiest to find and use, there are several reasons why they may not necessarily be the best. Census data become outdated rather quickly. In areas of rapid population change, the Census data may begin to lose their usefulness within a year or two after the Census reports are published. Even in relatively stable populations,ten years may be too long to rely on a statistical portrait that has not been updated. A full or modified census is scheduled to be taken in 1985.

Local data sometimes can be used to find discrepancies or changes in Census data. In some local areas school censuses and records, tax records, or utility records can provide recent data on population characteristics and school enrollment. These data then can be used to update or correct the Census data. However, before more recent local data are used, the local data should be shown to be at least as accurate as Census data. Otherwise it may constitute little or no improvement over older but more accurate Census data.

MASS MEDIA AS A SOURCE OF LOCAL INFORMATION

Mass media are often overlooked as a source of community information, but newspapers and particularly local newsletters can be rich sources of information. For example, a single issue of a small-town weekly in the Midwest contained the names of nine local political and governmental officials, the State and Federal legislative representatives of the area, five local ministers, ten ranking officials, and the newspaper editor. Not one school official was named. This same issue identified eleven separate governmental agencies, sixteen voluntary associations, five special interest (farm) groups, six churches and the three major employers in the area. Of course, not all local newspapers portray community structure this completely.

The effectiveness of newspapers as an information source depends on several factors. Newspapers sometimes concentrate on State and National news rather than on local news. Also, newspapers are sometimes biased in their presentation of the news, although these biases are usually obvious to those acquainted with the community and can be taken into account. Finally, the size of the circulation area can influence the usefulness of newspapers as a source of data, particularly about community organization and voluntary associations. The larger the circulation area, the more spotty the local news is likely to be, particularly in identifying influential leaders and organizations.

Nevertheless, newspapers are a fundamental source of community data. First, the press has some impact on the attitudes and opinions of parents, board members, staff, pupils, and voters in general. Also, newspaper editorials often sway undecided voters. The extent to which the schools get an accurate press is of primary concern. Second, newspapermen tend to know a great deal about what goes on in the community, and they tend to view the community from a broader perspective than is true of the average citizen. As such, they are excellent information sources. Finally, newspapers are a crucial resource for keeping up the "who's who" in local action groups as well as in other organizations. Most local newspapers maintain a modest community information data base which they are willing to share, in addition to the historical record provided by the file of back issues of the paper.

Television is probably as crucial as newspapers to the schools, but as a community information source it is usually vastly inferior. The same can be said of radio. This results from the simple fact that newspapers print hundreds of words for every one that goes over radio or television. Also, information is more easily developed from written communication than from the more transitory content of oral broadcasts.

Administrators and those concerned with policy decisions should conduct a survey to determine the circulation, audiences, and impact of mass media in the service area. It is important to know what segments of the population read and/or listen to and which communication media have greatest influence. These questions can be answered by the survey techniques described in Chapter 6.

COMMUNITY RESIDENTS AS A SOURCE OF INFORMATION

It has often been said that "information is power," but the observation can also be made that "power is information" because people in positions of power and responsibility tend to be "in the know." For this reason, leaders in the community are likely to be excellent sources of information, particularly in the social structure and dynamics areas of community life.

The problem that educators sometimes face in tapping this information source stems from a failure to see educational decisions as being related to the politics, economy, and history of the local area. School leaders, while they have been assigned roles as community leaders, are often not "of the community" and are often seen as "transients" by the community. Accordingly, they have had difficulty in gaining access to the information possessed by experienced leaders. On the other hand, the fact that the school system usually lies outside the political and/or governmental jurisdiction of the community may predispose community leaders to be more open in sharing their knowledge than they might otherwise be.

People "in the know" are familiar with where various kinds of information are kept. Thus, community leaders are a good source in the quest for local data sources. A preliminary screening question might be: "What local official leader or private citizen in a community has probably had to find this item of information before?"

Local political officials or social leaders may be the key to understanding the power structure of the community. They may be a particularly important source for a school leader, since he/she may never know a community with the intimacy possessed by "permanent" residents. Tapping the information possessed by key individuals in a community may mean using formal methods such as surveys and interviews, or it may mean informal discussions with leaders who have been identified from newspapers and conversations with people in the community. It may also mean formal reputational type studies done through established organizations.

Older residents may be an important key to understanding the history of questions or problems in the community. Often it is important to know whether or not issues of the type currently raised have appeared before, in what form they have arisen, what, if any, solution was proposed, and who were the actors at the time. It may be important to know the history of how an issue became an issue and of the previous attempts to resolve it. Often there are long histories of animosities of various kinds standing in the way of an intelligent planning process, and this history may only exist in the memories of older people, since such social history seldom finds its way into the printed record. Among the data sources for such information might be local historical museum curators, visits to historical sights, face to face surveys with older people who held influential positions in the past. Clubs and associations of older residents of an area may be the repository of much long-forgotten history in communities which, if tapped, could furnish valuable insights helpful to planning and decision making. Tapping the formal organizations of older persons, historical societies, library records, and the newspaper morgue may also uncover additional individual resources.

Identifying local community leaders or older residents knowledgeable about the community may be the key to uncovering persons whose associations with community physical resources and facilities are vital. In one small community, for example, it was commonly acknowledged that there was only one man who had a complete knowledge of the water and sewer lines, and these he kept in his head. Public records, because of change in administration and informal filing processes, were so incomplete as to be useless. As a result, this one man possessed vital information that would have been useful in making some educational decisions.

Informal networks of community leaders can furnish clues to who may have information pertinent to community problems. This may be true where suburbs have been carved from farmlands under smaller and more informal governments. In such cases, the history of drainage areas, aquafers, and previous land use policies or attempts to change them may be known only by few residents in the area.

An educational administrator who is new to an area may find it helpful to use all of the above sources to gather information. In smaller communities particularly, the nuances of the personal and social associations of the residents may be very difficult or impossible for school personnel to acquire. Newspaper social pages will often highlight citizens who appear to be the leaders of the community, but the unobtrusive networks of the community seldom appear. The administrator who involves himself/herself with local social organizations such as the country club, the athletic club, the leading service clubs, the chamber of commerce or industrial association, may find himself/herself rubbing shoulders with those who are said to be the leaders of the community. However, the history of the relationships of the newcomers and the older residents are very difficult to define. The usual survey-type of information will not reveal them. Formal interviewing of individuals may not reveal these hidden sources of information. In such cases, it is necessary to talk with many people to ferret out information on the demographic and social characteristics of the population of the community, and then to make some educated guesses. Surveying communities for some measurement of attitudes, beliefs, and values may provide many valuable clues, but it may not reveal the social and power relationships of the community unless specifically designed for this purpose. Inferences may be the best information available for some problems.

Checklist of Experienced Leaders as Potential Sources of Information

- -School Board Members
- -Bankers
- -Clergy
- -Business People
- -Politicians
- -Farmers
- -Real Estate Brokers
- - Professional People such as Lawyers, Doctors, Social Workers, Educators
- -Industrialists
- -Automobile Dealers
- -Union Officers
- -Teachers Organization Officers
- -PTA Officers
- -Older Citizens
- -Youth and Youth Leaders

BEST COPY AVAILABLE

A GUIDE TO THE LITERATURE

This handbook is designed to be self-sufficient. But users who want a greater depth of information collection and analysis than the handbook provides, will want to consult other sources too. Chapter 4 through 7 cover information collection and analysis. The guide to the literature supplements these chapters.

The goal of the guide to the literature is to orient handbook users to a broad array of resources on the various topics discussed in the handbook. The guide lists agencies that provide information services and standard reference books organized by topic.

POPULATION

The United States Bureau of the Census is the main source of population information and analysis within the United States. The Census Bureau's Data User Services Division provides numerous information and referral services. Appendix 4 lists address and phone numbers for the Washington offices of the Division and the 12 Census Bureau Regional Offices.

The Census Bureau also publishes DATA USER NEWS, which provides up to the minute information on data services.

Local and regional population analysis is also done by university-based population research organizations. The following is a selective list:

Population Studies Center
University of Pennsylvania
3718 Locust St.
Philadelphia, Pennsylvania 19104

Office of Population Research
Princeton University
Princeton, New Jersey 08540

East-West Population Institute
The East-West Center
Honolulu, Hawaii 96822

Center for Population Studies
Harvard University
9 Bow Street
Cambridge, Massachusetts 02138

Population Studies Center
University of Michigan
Ann Arbor, Michigan 40014

BEST COPY AVAILABLE

Carolina Population Center
University of North Carolina
123 E. Franklin St.
Chapel Hill, North Carolina 27514

Center for Population Research
Georgetown University
Washington, D.C. 20007

Scripps Foundation for Research in Population Problems
Miami University
Oxford, Ohio 45056

Institute of Population and Urban Research
University of California
[illegible]34 Piedmont Avenue
Berkeley, California 94720

Population Research Center
University of Chicago
1413 E. 60th St.
Chicago, Illinois 60637

Demographic Research and Training Center
University of Georgia
Athens, Georgia 30601

Minnesota Population Studies Center
University of Minnesota
Minneapolis, Minnesota 55455

Population Research Lab
University of Southern California
Los Angeles, California 90007

Population Research Center
University of Texas
Austin, Texas 78705

Center for Studies in Demography and Ecology
University of Washington
Seattle, Washington 98105

Center for Demography and Ecology
University of Wisconsin
Madison, Wisconsin 53706

General Sources:

Shryock, Henry S. and Siegel, Jacob S. *The Methods and Materials of Demography. Vols. I and II*. Washington, D.C.: United States Government Printing Office, 1973.

BEST COPY AVAILABLE

Planning for an Aging Population:

DeCrow, Roger. New Learning for Older Americans: An Overview of National Effort. Washington, D.C.: Adult Education Association, 1975.

Grabowsky, S. and W.D. Mason. Learning for Aging. Washington, D.C.: Adult Education Association, 1974

Hendrickson, A. A Manual on Planning Educational Programs for Older Adults. Tallahassee: Florida State University, Department of Adult Education, 1973.

Korim, Andrew. Older Americans and Community Colleges: An Overview. Washington, D.C.: American Association of Community and Junior Colleges, 1974.

Korim, Andrew. Older Americans and Community Colleges: A Guide for Program Implementation. Washington, D.C.: American Association of Community and Junior Colleges, 1974.

PLANNING, LAND USE, AND ECONOMY

The literature on planning, land use, and the local economy is enormous and is growing daily. Standard works are listed at the end of this section, but important sources of bibliographic information and trends in these fields are perhaps more useful. Armed with these, a current set of information can be developed quickly at any time in the future. However, because the professional and agency literature in these fields comes from a very diverse array of sources, it is difficult to maintain an updated listing.

A Few Primary Sources:

The public information offices of three Federal government departments are initial reference points. Specifically, the Department of Housing and Urban Development (HUD), the Department of the Interior, and the Department of Transportation all generate relevant information (including bibliographies). Numerous other Federal (and State) agencies may also be good information sources. On specific issues inquiries sent to the Office of Public Information in Washington, D.C. for the attention of individual agencies will reach the right office and receive a response.

The number of private organizations dealing with planning and land use concerns are also quite numerous. The Urban Institute, the Urban Land Institute, and Resources for the Future are three representative organizations. Each is a source of important studies. The two major planning organizations in the United States are the American Society of Planning Officials and the American Institute of Planners. The former publishes a journal entitled Planning which includes each month a listing of the books and

BEST COPY AVAILABLE

reports it receives. As a major national organization it tends to receive most important items. The *Journal* of the American Institute of Planners also includes a listing of articles published in a variety of related professional journals. It tends to focus on theoretical and conceptual issues whereas *Planning* deals with more immediate needs, trends, and problems in planning and the community.

A third organization, the Council of Planning Librarians, publishes a bibliography series that has numerous bibliographies about various aspects of communities. A complete listing of their bibliographies is available on request. The urban research centers at The Johns Hopkins University, Rutgers, Harvard-MIT and many other universities provides many sound studies. These sources tend to be particularly useful when all types of questions relating to planning and land use are being considered instead of the actual plan for land use of local communities. For specific local information, seek out the reports and maps produced by the local or regional planning agency.

Public Sources:

Office of Public Information
Department of Housing and Urban Development
451 7th Street SW
Washington, D.C. 20401

Office of Public Information
Department of Interior
"C" Street
Between 15th and 19th St. NW
Washington, D.C. 20240

Office of Public Information
Department of Transportation
400 7th St. SW
Washington, D.C. 20590

Private Sources:

The Urban Land Institute
1200 18th Street, NW
Washington, D.C. 20036

American Society of Planning Officials
1313 E. 60th St.
Chicago, Illinois 60637

Council of Planning Librarians
P.O. Box 229
Monticello, Illinois 61856

BEST COPY AVAILABLE

Resources for the Future
1755 Massachusetts Ave., NW
Washington, D.C. 20036

American Institute of Planners
1776 Massachusetts Ave., NW
Washington, D.C. 20036

The Urban Institute
2100 M Street, NW
Washington, D.C. 20037

Planning:

Bennis, Warren G; Benne, Kenneth D; Chin, Robert; and Corey, Kenneth E. The Planning of Change. 3rd edition. New York: Holt, Rinehart and Winston, 1975.

Berry, Brian J. L. The Human Consequences of Urbanization. New York. St. Martin's Press, 1973.

Goodman, William I., ed. Principles and Practice of Urban Planning. 4th edition. Washington, D.C.: International City Manager's Association, 1968. (A new edition is scheduled to appear in 1978.)

Krueckeberg, Donald A. and Silvers, Arthur L. Urban Planning Analysis: Methods and Models. New York: John Wiley, 1974.

Perloff, Harvey S., editor. Agenda for the New Urban Era: Second Generation National Policy. Washington, D.C.: American Society of Planning Officials, 1975.

Whittick, Arnold, editor. Encyclopedia of Urban Planning. New York: McGraw-Hill, 1974.

Land Use:

Anderson, James R., et al. A Land Use and Land Cover Classification System for Use with Remote Sensed Data. Geological Survey Research Paper 96. Washington, D.C.: U.S. Government Printing Office, 1976.

Chapin, F. Stuart, Jr. Urban Land Use Planning. 2nd edition. Urbana: University of Illinois Press, 1965.

Clawson, Marion. Suburban Land Conversion in the United States: An Economic and Governmental Process. Baltimore: The Johns Hopkins Press, 1971.

Reilly, William K., ed. The Use of Land: A Citizen's Policy Guide to Urban Growth. New York: Thomas Y. Crowell Co., 1973.

United States Urban Renewal Administration and the Bureau of Public Roads. *Standard Land Use Coding Manual*. Washington, D.C.: U.S. Government Printing Office. 1976.

Economy:

Perloff, Harvey S. and Wingo, Lowden, Jr. *Issues in Urban Economics*. Baltimore: Johns Hopkins, 1968.

Thompson, Wilbur R. *A Preface to Urban Economics*. Baltimore: Johns Hopkins, 1965.

Tiebout, Charles M. *The Community Economic Base Study*. New York: Committee for Economic Development, 1962.

Friedman, John and Alonso, William. *Regional Policy: Readings in Theory and Applications*. Cambridge, Mass.: MIT Press, 1975.

Futurism:

Abler, Ronald, et al., eds. *Human Geography in a Shrinking World*. North Scituate, Mass.: Duxbury Press, 1975.

Forrester, Jay W. *World Dynamics*. Cambridge: Wright-Allen, 1971.

Kahn, Herman and Wiener, Anthony J. *The Year 2000: A Framework for Speculition on the Next Thirty-three Years*. New York: MacMillan, 1967.

Sackman, Harold. *Delphi Critique*. Lexington, Massachusetts: Lexington Books, 1975.

Toffler, Alvin. *Future Shock*. New York: Random House, 1970.

Weaver, Timothy W. *The Delphi Method*. Syracuse University: Educational Policy Research Center, 1970.

SOCIAL STRUCTURE AND DYNAMICS

There is much literature from many disciplines, and there are many public and private organizations that deal with areas included under Social Structure and Dynamics. What follows is a highly selective list of references that can serve as sources of information for local educational planners. It may be necessary to combine references from this section with sources from other sections of the handbook for more in-depth research needs.

Community Education:

The following is a list of some Federal and other public sources:

Office of Community Education
U.S. Office of Education
ROB No. 3
7th and D Streets, SW
Washington, D.C. 20202

Office of Community Education Research
3112 School of Education Building
University of Michigan
Ann Arbor, Michigan 48104

National Joint Continuing Committee on Community Education
1601 N. Kent Street
11th Floor
Arlington, Virginia 22209

Private Sources:

National Community Education Association
1017 Avon Street
Flint, Michigan 48503

Institute for Neighborhood Studies
1901 Que Street, NW
Washington, D.C. 20009

Charles S. Mott Foundation
Mott Foundation Building
Flint, Michigan 48502

National Center for Voluntary Action
1785 Massachusetts Avenue, NW
Washington, D.C. 20036

Institute for Responsive Education
704 Commonwealth Avenue
Boston, Massachusetts 02215

National Self-help Resource Center, Inc.
1800 Wisconsin Avenue, NW
Washington, D.C. 20007

The Twentieth Century Fund
New York, New York 1971

National School Relations Association
1801 N. Moore Street
Arlington, Virginia 22209

General Works:

Seay, Maurice. *Community Education, An Emerging Concept*. Midland, Michigan: Pendell Press, 1976.

Riddick, W. *Charette Processes: A Tool for Urban Planning*. York, Pennsylvania: Shumway Publishing, 1971.

Community Education:

Phipps, Lloyd J. and Jackson, Franklin O. *An Annotated Bibliography of Literature on Citizens Advisory Councils and Committees*. Rurban Education Development Laboratory. University of Illinois at Urbana. 357 Education Building. Urbana, Illinois 61901, 1973.

Political Characteristics and Surveys:

There are several journals in Political Science that contain articles relevant to understanding the political dynamics of a community. These same journals also often publish articles relevant to surveys and surveying techniques.

American Political Science Review, journal of the American Political Science Association.

American Journal of Political Science (formerly *The Midwest Journal of Political Science*), published by the Midwest Political Science Association.

Journal of Politics, published by the Southern Political Science Association.

Public Opinion Quarterly.

General Works--Community Power:

Aiken, Michael and Mott, Paul E., eds. *The Structure of Community Power*. New York: Random House, 1970.

Clark, Terry N. *Community Structure and Decision Making: Comparative Analysis*. Chandler Publishing Company, 1968.

Dahl, Robert A. *Who Governs*? New Haven: Yale University Press, 1961.

Gittell, Marilyn and Hevesei, Alan G. *The Politics of Urban Education*. Frederick A. Praeger, 1969.

Iannaccone, Laurence. *Politics in Education*. New York: The Center for Applied Research in Education. 1969.

Arnstein, Sherry R. "A Ladder of Citizen Participation", AIP Journal. July, 1969. 216-224.

General Works—Surveys:

Backstrom, Charles H. and Hursh, Gerald D. Survey Research. Evanston, Illinois: Northwestern University Press, 1963.

Conway, James A., Jennings, Robert E. and Milstein, Mike M. Understanding Communities. Englewood Cliffs: Prentice-Hall, 1974.

Parten, Mildred. Surveys, Polls, and Samples: Practical Procedures. New York: Harper and Brothers, 1950.

Sudman, Seymour. Applied Sampling. New York: Academic Press, 1976.

Warwick, Donald P. and Lininger, Charles A. The Sample Survey: Theory and Practice. New York: McGraw Hill Book Co., 1975.

Educational Planning:

There are many organizations that publish journals, newsletters, bibliographies and monographs that are relevant to educational planning. Listed below are some organizations that may be able to supply information for educational planning:

American Association of School Administrators
1801 North Moore Street
Arlington, Virginia 22209

Association for Supervision and Curriculum Development
Ohio State University
29 West Woodruff Avenue
Columbus, Ohio 43210

Association of Collegiate Schools of Planning
237 Arden Road
Pittsburgh, Pennsylvania 15216

Building Systems Information Clearinghouse/Educational Facilities
Laboaratories (BSIC/EFL)
3000 Sand Hill Road
Menlo Park, California 94025

Center for Urban Education
105 Madison Avenue
New York, New York 10016

Council of Educational Facility Planners
29 West Woodruff Avenue
Columbus, Ohio 43210

Council of the Great City Schools
1819 H Street, N.W., Suite 850
Washington, D.C. 20006

Designing Education for the Future
1362 Lincoln Street
Denver, Colorado 80203

Educational Facilities Laboratories
850 Third Avenue
New York, New York 10022

Eric Clearinghouse on Educational Management
University of Oregon
Eugene, Oregon 97403

Future Information Network
c/o Michael Marien
World Institute
777 United Nations Plaza
New York, New York 10017

Institute for the Future
2725 Sand Hill Road
Menlo Park, California 94025

International Institute for Educational Planning
UNESCO
7 rue Eugene-Delacroix
75 Paris, France

International Society of Educational Planners
Mankato State College
Mankato, Minnesota 56001

Metropolitan Toronto School Board Study of Educational Facilities
155 College Street
Toronto 2B, Canada

National Association of Secondary School Administrators
1904 Association Drive
Reston, Virginia 22091

National Center for Educational Statistics
Office of Education
400 Maryland Avenue, S.W.
Washington, D.C. 20202

National Education Association
1201 16th Street, N.W.
Washington, D.C. 20036

National Society for the Study of Education
5835 Kimbark Avenue
Chicago, Illinois 60637

Ontario Institue for Studies in Education
252 Bloor Street West
Toronto, Ontario, Canada

Society for College and University Planning
c/o Columbia University
616 West 114th Street
New York, New York 10025

Special Libraries Association
Planning, Building and Housing Section of Social Science Division
235 Park Avenue, S.
New York, New York 10003

Western Interstate Commission for Higher Education
P.O. Drawer P
Boulder, Colorado 80302

Public:

The National Institute of Education
U.S. Department of Health, Education, and Welfare
Office of Public Affairs
Washington, D.C. 20208

Periodicals:

Periodicals are another source of current information in education. The addresses of these periodicals can usually be found in one of the guides to periodicals listed below:

Periodical guides:

Ulrichs International Periodicals Directory.

Current Index to Journals in Education.

Education Index.

Periodicals--A Selective List:

American School and University

Association of Collegiate Schools of Planning Bulletin

Change Magazine, formerly Change in Higher Education

Changing Education

Council of Educational Facilities Planners Journal

Education Tomorrow

Educational Planning

Forum for the Discussion of New Trends in Education

Journal of Educational Finance

Long-Range Planning

Nation's Cities

Nation's Schools

Notes on the Future of Education

Phi Delta Kappa

Planning and Changing

Planning for Higher Education

Research in Education

School and Community

School Management

Urban Education

There are many publications each year that do not appear in commercial or professional publications. An excellent source for such publications is ERIC, the Educational Resources Information Center. ERIC is a nationwide system of 16 clearinghouses that collects educational information and then disseminates it throughout the United States. The documents collected by the clearinghouses are published in microfiche form by a central ERIC Clearinghouse in Washington, D.C. and listed in a monthly catalog, Research in Education. Many county and State departments of education as well as colleges and universities have ERIC collections and catalogs. The ERIC system includes abstracts of the articles in the system. In addition, the American Association of School Administrators publishes abstracts of ERIC publications called The Best of ERIC.

Bibliographies:

Choi, Susan and Cornish, Richard. Selected References in Educational Planning. San Jose, California: Project Simu-School, 1975. (Project Simu-School, Santa Clara County Compnent, 100 Skyport Drive, San Jose, California 95110.)

Human Services Bibliography Series: Approaches to Human Services Planning. Journal of Human Services Abstracts. (Project Share, P.O. Box 2309, Rockville, Maryland 20852.)

Marien, M.D. *Essential Reading for the Future of Education*. Syracuse University: Educational Policy Research Center, 1971.

General Works--Education Planning:

Banghart, Frank William and Trull, Albert. *Educational Planning*. New York: Macmillan, 1973.

Brieve, Fred J. *Educational Planning*. Worthington, Ohio: C.A. Jones Publishing Co., 1973.

Coombs, Philip Hall. *What is Educational Planning?* UNESCO. Paris: International Planning Institute for Educational Planning, 1970.

Correa, Hector. *Population, Health, Nutrition, and Development: Theory and Planning*. Lexington, Mass.: Lexington Books, 1975.

________,________. *Quantitative Methods of Educational Planning*. Scranton: International Textbook Co., 1969.

Fox, Karl A. *Economic Analysis for Educational Planning: Resource Allocation in Nonmarket Systems*. Baltimore: Johns Hopkins University Press, 1972.

Green, Thomas F., ed. *Educational Planning in Perspective*. Guildford, England, 1971.

Itzkoff, Seymour W. *A New Public Education*. New York: McKay, 1976.

Kaufman, Roger A. *Educational System Planning*. Englewood Cliffs, N.J.: Prentice-Hall, 1972.

Tanner, C. Kenneth. *Designs for Educational Planning: A Systemic Approach*. Lexington, Mass.: Heath Lexington Books, 1971.

Temkin, Sanford. *Handbook of Comprehensive Planning in Schools*. Englewood Cliffs, N.J.: Educational Technology Publications, 1975.

General Works--Future Planning in Education:

Hostrop, Richard W., ed. *Foundations of Futurology in Education*. Homewood, Illionis: ETC Publications, 1973.

Morrish, Ivor. *Aspects of Educational Change*. New York: John Wiley, 1973.

Shane, Harold Gray. *The Educational Significance of the Future.* Bloomington, Indiana: Phi Delta Kappa, 1973.

BEST COPY AVAILABLE

The sources mentioned emphasize information about learners and communities. However, information about institutions may also be obtained from existing sources, such as annual reports, institutional records, catalogs, and statistical reports.

Criteria

In selecting existing sources of information, care should be taken about:

1. pertinency of the information,
2. who publishes the information and why,
3. method by which information was collected,
4. general evidence of careful work,
5. whether the findings are in conflict with other studies and why.

Purpose

Existing sources of information are particularly valuable for the effective identification of target areas. Since Medsker (1975) asserts that surveys are most valuable after target populations have been identified, there is an implication here for one possible combination of sources: identification of a target audience via existing sources, followed by a survey of primary sources (the members of the target audience).

Examples of use

Some institutions have made use of existing sources for compiling demographic profiles of their communities or districts, or have had other agencies compile such information for them.

For instance, Delaware County Community College had the Pennsylvania Economy League prepare an analysis of demographic trends for them which included projections of populations in various age groups and enrollment projections for the college.

The New York State Central Region Continuing Education Studies prepared an extensive demographic profile of the region using secondary sources and found highly pertinent trends upon which planning might be based.

SOURCE COMPARISON SHEET

Source name:

Existing source?
Primary source?

If an existing source:
- Who collected the information?
- Why?
- When? How often is it updated?
- From whom?
- Is the sampling representative?
- Are the collection techniques valid and reliable?
- Does the source contain the specific information you want?
  - If not, can that information be calculated or extrapolated at less cost than collecting new information?
- Is the information in a form you can use? If not, can the desired format be calculated or extrapolated at less cost than collecting new information?

In either existing or primary sources, consider:

- Costs:
  - in money:
    - to acquire or use existing sources
    - to pay fees and salaries for researchers or information collectors
    - to pay travel costs for researchers or information collectors
    - to cover rent, supplies and other office expenses.
  - in personnel:
    - in training researchers or information collectors
    - in time doing research or collecting information
  - in potential problems:
    - concerning privacy
    - concerning survey-fatigue of respondents
    - concerning dealing with respondents in general
- Ease of access and use:
  - where is the information and how difficult is it to get to and use?
  - If an existing source, can it be bought or rented, or is it necessary to go to an outside facility to use it?
  - Are special skills needed to manipulate existing sources?
  - For primary sources, what skills are needed to collect information?
- Other criteria:
  - Who can give the best report of the information?
  - What trade-offs must be made? for instance, might a survey be used as a consciousness-raising promotional device?

EXERCISE:

Identify three or more potential sources of information for your needs assessment.

Complete a Source Comparison Sheet for each source.

Compare the sources.

Which source or combination of sources would best suit your needs assessment?

VII. COLLECTING AND COMPILING INFORMATION

Three issues involved in the collection/compilation of information about needs are: methods of collection, who should collect, and how often information should be collected.

Having selected one or more sources of the information desired, the needs assessor must next decide on one or more methods for collecting and compiling information. In the NAIS, we use the term collect to mean gathering information from a primary source, whereas compile is used for the research done in gathering information from an existing source.

In our review of the literature and in interviews, we discovered two contradictory aspects of needs assessment information collection. First, when we said "needs assessment," most people thought we meant "survey." Whether they were in favor of surveys--one of our telephone respondents told us surveys were "the only way to collect information"--or opposed to them--another told us that surveys are not worth the time and money and are difficult to justify--they equated needs assessment with surveys.

Secondly, we found quite a few references in the literature which urged multiple methods for needs assessment. Lenning and McMahon both recommend multiple approaches, as did several of our interviewees. Moreover, the list of possible methods of assessing needs is very long. Summarizing Lenning and other references as well as the input from interviews, we have prepared the following list of possible methods for collecting and compiling information about needs.

Small group techniques

e.g. charettes
buzz groups
brainstorming
nominal group
task force

Interviews: open-ended
            structured

Informal conversations

Conferences - workshops - clinics

Simulations

Role-playing and other projective techniques

Intelligence Systems

Observation
    e.g. self-observation
         video tape

Case studies

Testing
    e.g. written diagnostic and trouble-shooting exercises
         computer-assisted testing

In-basket techniques

Ratings of performance
    including supervisor evaluations, self-ratings

Product assessments

Expert opinions

Hearings, community meetings, and speak-ups

Surveys and polls

Task analysis

Equipment analysis

Problem analysis

Sorting techniques

Checklists

Counseling

Critical incident techniques

Skills inventory

Delphi technique

Experimentation

Compiling Methods

Case studies

Trend projection techniques

Secondary analysis

Calculation

Historical analysis

Comparison-making

Although long, these lists are probably not exhaustive. There are almost as many ways to find out about needs as there are needs to find out about.

From these lists we have selected five methods for discussion. We discuss surveys and polls, because they are most frequently used. We chose intelligence systems because, although used by many institutions, they are sometimes disregarded as a valid source of needs information and can be made more effective. We consider hearings and public meetings because they offer an increasingly popular way to find out about people's needs and attitudes. We look at the Delphi technique because it can yield valuable information within certain limits which must be recognized. Finally, we treat trend projection techniques as a valuable method for use with existing sources.

1. Surveys

Surveys, polls, and marketing research are probably the most frequent method for collecting information about needs. This method is most effectively used to determine the needs of:

1. A small, homogeneous target group where uniformity allows extrapolation from a small sample, or
2. A large, heterogeneous target group, where careful sampling can yield reliable projections to the whole group.

Such research is undertaken in an attempt to learn something reliable. The value of the results depends on the skill with which the procedure is undertaken. The investment of money and time can be wasted or even have a negative effect if the survey is poorly designed and carried out.*

Criteria, Indicators, and Measures. Three concepts associated with the identification of needs are: criteria, indicators, and measures. Criteria are the standards which enable someone to determine that a need exists. In the case of a normative need, for example, the criterion would be a norm, such as a high school education, below which a need exists--that is, if a person has less than a high school education, he/she would be said to have a need to reach that education level.

Indicators are signs that a need exists--ways in which we know that there is a need. An employee's inability to carry out tasks on a new job would be an indicator of a need of training.

Measures are items, questions, instruments, and techniques used to gather information about the needs of the targets of assessment. In the case of a survey, the instruments should identify and clarify information needs. The form should be easy to understand and tabulate. Items about which information is desired should be gathered for an item pool from sources such as informal conversations, literature, and other survey instruments. Construction of questionnaires involves the skillful formulation and sequencing of items.

---

*Kotler (1975)

According to Kotler (1975) three kinds of errors are most common in questionnaire construction: types of questions asked, form and wording of questions, and sequencing of questions.

Types of Questions. Each question should be checked to determine whether or not it is necessary to attaining the goals and objectives. Eliminate all unnecessary questions.

Form and Wording. Open-ended questions allow the respondent more freedom, but are difficult to code and tabulate. Closed-ended questions limit the respondents' thoughtfulness, but reduce costs in the analysis stage. The questionnaire designer should strive for simple, direct, unambiguous and unbiased wording.

Sequencing. The order of items affects response. There should be a logical sequence, but boring questions (such as age, sex, etc.) should be asked for last and one should lead off with something interesting.

Pre-test. A pre-test or pilot test of the items and/or the entire questionnaire should be carried out with a population similar to the one which will be responding to the final version.

Validity and Reliability. A highly technical discussion of validity and reliability in a needs assessment instrument appears in Crumpton (1974). Although not every questionnaire designer may wish to carry the matter to this level of technicality, it is well to recognize the value of such design work in adding to the value of the information obtained by the use of the instrument. Institutions may wish to consider seeking technical assistance in the development of measures.

With or without such assistance, someone must determine whether the measure is indeed related to the concept being measured. Romney (1978) surveyed 1,150 administrators, faculty members, and trustees to ascertain the acceptability of measures of institutional goal achievement. He associated certain measures with certain goals and surveyed the respondent population for agreement.

Sampling. Sampling allows the needs assessor to determine the needs of a large number of people by collecting information from only a small number, or sample. Some examples of the steps involved in drawing a sample can be given:

1. The first step in sampling is to determine the population to be studied. If planning the survey has been thorough, this should be a relatively simple step. A few examples may help to clarify the idea of defining a population.

   A school administrator is interested in determining why past school levies have been defeated. Since the administrator has already determined the primary purpose of his/her survey, he/she only needs to determine the proper population to be surveyed. In this case the population of concern is eligible voters. Looking at a group composed of people ineligible to vote would not lead to a better understanding of why past levies failed. Thus, the population of concern to this administrator is eligible voters within the school district.

   If an administrator is interested in discovering how the parents in his district feel about a new science program in the district, including parents of children who did not participate in the program would not help the administrator understand the problem.

Determining the population is very important to successful surveying. Planning for surveys must take into account not only defining the problem but also determining the population to be surveyed.

2. The second step in selecting a sample is to obtain a complete and accurate list of all the members of the defined population. Unless all the members of the population are included on the list, not all of them will have an opportunity to be selected for the survey and the sample will be biased. Including people who are not members of the population may also lead to faulty results.

    In the school levy example, the administrator would obtain the most current list of all the eligible voters in the district from the board of elections. The sample is drawn from this list.

    In the science program example, the administrator could use a list of all the parents of children participating in the new science program in the district. The list would be checked to omit duplicates--people who have more than one child participating in the science program. After checking to be sure that all parents with children in the science program are included, the sample could be drawn.

3. A second prerequisite for drawing a sample is determining sample size. The detailed literature on sampling should be consulted to determine the optimum sample size for the purposes of a study. Sample size is determined mainly by how accurate the study results must be.

    If a survey is aimed at finding out attitudes toward a proposed new building among residents of the immediate neighborhood, a sample could be drawn from a list of addresses. Address lists are available from the U. S. Postal Service. These lists can then be matched with a map of the neighborhood to define the population of addresses to be sampled.

4. The fourth step is to decide the sampling method to be used. The sampling method is determined by the problem being investigated and the accuracy required in the results. Random sampling gives each member of the population an equal chance of being selected and the selection of the sample is governed only by chance. A simple random sample can be drawn by selecting a group of numbers from a random number chart. The amount of numbers to be drawn is determined by the size of the desired sample plus some extra

numbers for repeats. The numbers drawn from the random number table correspond to position on the population list. For example, if the following random numbers are chosen: 10, 68 and 120, then the 10th, 68th, and 120th individuals on the population list would be included as members of the sample.

There are other techniques for choosing samples (systematic sampling, with a random start; stratified sampling; multistage, cluster sampling), but these techniques are more complicated and require more skill to produce an unbiased, representative sample. If something other than a simple random sample is used, then a comprehensive guide to sampling or assistance from a consultant is advisable.

SURVEY DESIGN

The specific ideas to be surveyed must be pinpointed and a method selected for measuring them. If a questionnaire is used, the following are useful guidelines:

1. Questions should be precise. This means that they should be complete, definite as to time and place, definite as to comparisons that are to be made, and simple and direct in wording.

2. Questions should not use words with unclear meaning to the respondent.

3. Questions should not be loaded or emotionally charged.

4. Questions should be as short as possible.

5. Questions should not be embarrassing.

In format, the introduction to the questionnaire should create a good impression by being realistically worded, non-threatening, serious, neutral, and firm. The fewer the number of items the better. If possible, the items should be in a logical sequence and there should be adequate space between items. The physical layout should be consistent and present a tidy appearance. These points may seem insignificant, but they can have a significant influence on the rates of response, particularly for mailed questionnaires.

The sequence of questionnaire items can also effect the type of responses that are received. The following are useful guidelines for designing a questionnaire:

1. The introduction to the survey should be short, non-threatening, serious and neutral. It should include an explanation of the purpose and sponsor of the survey.

2. The questions at the beginning of the survey should be easy to answer and non-threatening. The first part of a survey establishes rapport between the interviewer and respondent. Therefore, the questions used at the beginning should not be designed in such a way as to offend or anger the respondent.

3. After rapport has been established, the questions that make-up the heart of the survey can follow.

4. Demographic questions and sensitive questions should be put at the end of the survey. There is one exception to this general rule. If there are to be follow-up interviews, it is best to integrate demographic and sensitive questions into the heart of the survey.

5. Interviews should include a closing statement that thanks the respondent for participating. This section could also include an explanation of how the information will be used or directions on how the respondent can obtain the final results of the survey.

With questionnaires there is also the problem of selecting a response format that will allow the answers of many people to be summarized without misrepresenting the idea the item was intended to measure. There are a great many ways to do this, and experience is useful in selecting the appropriate format for a given situation and/or objective. See the guide to the literature for sources. In the absence of an experienced specialist, a consultant should probably be employed to help design the questionnaire. In selecting consultants, look not only at their training and experience but also at examples of work they have done for others.

The following discussion is designed to review some of the different forms of questions that can be used in a survey. There are three categories of questions: 1) demographic, 2) factual, 3) attitudinal. Each contributes significant information which varies according to the objectives of the survey.

DEMOGRAPHIC QUESTIONS

Demographic questions include:

age
marital status
sex
educational attainment
income
employment status
race

religion
family size
number of children
number of children in school
type of school attended
length of time in community
type of housing

The above list is not comprehensive, nor is it necessary to include all of the items in a particular survey. The main value of demographic questions is to identify who is responding. Demographic data can also aid in identifying sub-groups in the population. For example, if the chances for passing a school levy are to be assessed, identifying the parts of the community that are favorably disposed and which are not is important. By using well-chosen demographic data, characteristics of those respondents who are favorable to the levy can be identified, along with characteristics of those who are not. In this instance the surveyor might want to ask the following demographic data:

age
marital status
number of children
number of children in school
type of school attended
  public
  private
  parochial
voting participation in the last school levy
income - caution should be used with this classification because people tend to classify themselves as middle income whether or not they are
    fixed
    variable
    upper
    middle
    lower

These demographic variables were included because each of the above questions define areas that might affect the respondent's view of the levy. Thus, demographic data can be used to identify elements of the population that respond to questionnaire items in the same way.

In the example above, if one of the questions asked was whether the respondent would support a school tax levy, the researcher could examine the patterns in the demographic data and try to find patterns. Those opposing the levy might be found to fall into one or several of the following categories: older, single, childless. Non-supporters might tend to have children in private or parocial schools. In this way, the surveyor can identify those areas in the population where there is opposition or support for the issue. This information might be used to target segments of the population for advertising or information campaigns. It might be used to target "get out the vote" campaigns as well.

Here are some guidelines for using demographic questions in a survey:

1. Since questions take time and money to ask and since the length of a questionnaire can influence the respondent's cooperation, care should be taken to include only the demographic information that is pertinent to the issues prompting the survey.

2. Demographic questions should be designed carefully not to offend the respondent. This is particularly true of questions about income, occupation, family, dwelling, and age. If the repondent is offended early in the interview, he/she may be less willing to cooperate on the rest of the survey.

FACTUAL QUESTIONS

In conducting a survey, the researcher may want to know how knowledgeable the respondent is about the issues that appear in the questionnaire. In such a case, the researcher may decide to use factual items. From such questions it may be possible to determine if the respondent's opinions are based on fact, emotion, or lack of information.

Examples of factual questions include:

1. How often are school board meetings held?
2. How many school board meetings have you attended in the last year?
3. How many pupils are there in your school district?
4. What is the average per pupil expenditure in this State?
5. How does this compare with other states?
6. What is the pupil-teacher ratio in this school district?

The point is to ask questions that have definite answers. By comparing the respondent's answer to the factual answer to the question, the researcher can develop a feel for the amount of knowledge the respondent has about various issues. Factual questions can also test how effective efforts to inform the public about educational matters have been.

Once again care should be used in determining 1) whether or not to use factual questions, 2) what questions to use, and 3) how many questions to use. Factual questions need not be included in a questionnaire unless they are relevant to the goals of the survey. The respondent may feel intimidated by being presented with a group of factual questions he/she cannot answer, and this may affect how he/she answers the rest of the questions on the survey. Two useful guidelines for factual questions are: 1) use them only if they are important to the goals of the survey, and 2) use as few as will suffice.

ATTITUDINAL QUESTIONS

Open-Ended Questions

Open-ended questions are probably the most valuable in soliciting the opinions of the respondents in depth. However, this type of response is also the most difficult to process and analyze. If the results of the survey are to be tallied and put into meaningful summary form, then open-ended responses must be put into a limited number of categories that can be compared. Since open-ended questions allow respondents to state their unique opinions, not all responses will fit easily into definable categories. The surveyor must make an after-the-fact interpretation of the respondent's response and fit it into a particular category.

Thus, while open-ended questions yield interesting information, they are hard to categorize and responses may be difficult to analyze. In addition, open-ended responses may be difficult for an interviewer to record accurately. In sum, if this type of question is deemed necessary, it should be designed carefully and consideration should be given to the way responses will be recorded and categorized.

Multiple Choice Items

Using a multiple choice question can overcome the problems of open-ended questions but still maintain the valuable content. With this type of question, reponses are anticipated and categorized in advance. For example,

What do you think of the way science is being taught in the schools today?

_____ Too complex.

_____ Good because it introduces complex thinking.

_____ Too simple, not rigorous or complex enough.

_____ On the whole adequate, but some parts are too complex.

_____ On the whole adequate, but some parts are too simple.

_____ Don't know enough about the program to comment.

____ Other ______________________________

______________________________.

Providing a list of predetermined responses may eliminate some responses that may have been given but are not included on the list. Open-ended questions on a pre-survey can be used to formulate categories for multiple choice questions on the full-scale survey. This method provides some idea of the types of responses people make to the question and helps alleviate the problem of omitting meaningful responses from multiple choice questions.

Also, providing space where the respondent is free to include a response not included in the list, you account for opinions that might not have been anticipated. Finally, it is important to include a "no response" category. While a survey aims to collect information, it is important that the information collected be meaningful. An uninformed or rash response to a question may bias the results of the questions. Respondents should be provided with a dignified way of saying they do not know enough about the subject to provide a thoughtful opinion. Prefacing questionnaire items with a statement indicating that not everyone has opinions or information about a topic is a good way to lessen anxiety about inability to supply opinions.

Another consideration in using multiple choice questions is the number of choices. While it is important to provide a reasonably comprehensive list of responses, voluminous lists should be avoided since they defeat the purpose of providing easily summarized answers. The by-word here is "strike a happy medium." The survey must include a comprehensive list of responses that are not so specific that patterns in the responses are difficult to locate.

Scaled Multiple Choice Questions

The scaled multiple choice question allows the surveyor to gauge the intensity of the respondent's opinion. The surveyor allows the respondent to choose his/her response from a continuum of responses:

1. How would you rate the quality of teaching in the public schools?

   ____ excellent

   ____ adequate

   ____ inadequate

2. The school district should be operated under the assumption that every student is college bound.

______strongly agree

______agree

______neither agree nor disagree

______disagree

______strongly disagree

If an odd number of response categories is offered, the middle position is the neutral response category. In the example above, the neutral response categories are adequate and neither agree nor disagree. If the researcher decides to use an even number of response categories, usually a neutral position is not offered. In this case, the researcher is operating under the assumption that people hold opinions on both sides of the question and is forcing a choice.

There are several ways to construct scaled multiple choice questions. A numbered continuum can be used with numbers on each end offering opposing strong opinions.

How would you rate the job being done by the schools in teaching reading? Circle your choice.

1	2	3	4	5
superior		adequate		unacceptable

Samples of Three, Four, and Five-Scaled Multiple-Choice Response Items

Three-Response Items	Four-Response Items	Five-Response Items
Agree Undecided[a] Disagree	Strongly Agree Agree Disagree Strongly Disagree	Strongly Agree Agree Undecided Disagree Strongly Disagree
Important Undecided Not Important	Very Important Important Unimportant Not Important at all	Very Important Important Undecided Unimportant Not Important at all
Good Undecided Bad	Very Good Good Bad Very Bad	Very Good Good Undecided Bad Very Bad
Favorable Undecided Not Favorable	Highly Favorable Favorable Unfavorable Highly Unfavorable	Highly Favorable Favorable Undecided Unfavorable Highly Unfavorable

[a] The neutral "Undecided" could be replaced by "No Opinion," "Neither," "Don't Know," or any other neutral term, depending upon the logic of the scale itself.[1]

---

[1] James A. Conway, Robert E. Jennings, Mike M. Milstein. Understanding Communities. Prentice-Hall, Inc. 1974. p. 74

BEST COPY AVAILABLE

The following example offers two scales: the first gauges how important a respondent feels each of the areas is, and the second offers the repondent the opportunity to evaluate the job the school is doing in that particular area.

	To What Extent Should Item Be Taught To Children and Youth?					To What Extent Are We Meeting This Obligation?				
VALUE, ATTITUDE OR BEHAVIOR ITEM FOR CONSIDERATION	Imperative	Highly Desirable	Desirable	Optional	Unnecessary	Completely	Very Well	Satisfactorily	Unsatisfactorily	Not At All
Every person should have respect for law, order, and decency.										
Every person has the right of dissent (to disagree).										
Each person is obligated to be a participating citizen in a democracy.										
No person should be denied a place of residence because of race, color, creed or religion.										
Each person should engage in a career (work for a living).										

HOW TO ADMINISTER A SURVEY

How a questionnaire is administered will depend in large part on the amount of resources available and the need for accuracy. The best method of soliciting in-depth opinions is a face-to-face interview. But this method also demands the greatest resources. Unless professionals are hired, interviewers must be throughly trained to administer the interview.

Telephone interviews are less costly than face-to-face interviews and require less training time for interviewers. However, telephone interviews do not establish the same rapport between interviewer and respondent. It is easier for the respondent to terminate the interview at any point. For this reason, telephone interviews are usually shorter and are composed of shorter, less demanding questions than those used in face-to-face interviews.

Mailed questionnaires are also less costly than face-to-face interviews. They offer the advantage of allowing respondents to answer the questions in the privacy of their own homes. People are more likely to give honest opinions on questionnaires compared to face-to-face interviews. On the minus side, the response rate is sometimes low. This can affect the representativeness of the survey. One potential method of correcting this problem is to have follow-up mailings of new questionnaires to respondents who have not returned the first copy. The optimum time for a second mailing depends on the questionnaire and the nature of respondents. Follow-up mailings usually occur about two weeks after the initial mailing, but this is not a hard and fast rule. Another method of overcoming non-response to questionnaires is to have them collected personally instead of mailed back. Personal pick-up also offers the advantage of allowing the questionnaire to be checked at the time of pick-up for questions that have been omitted and sometimes a response for the omitted questions can be obtained.

Field Work. After the research design has been formulated, the research department must supervise, or subcontract, the task of collecting the data. This phase is generally the most expensive and the most liable to error. Four major problems arise:

1. Not-at-homes. When an interviewer does not find anyone at home, he can either call back later or substitute the household next door. The latter is the less expensive alternative, because the interviewer will not have to travel back to the same block. The only problem is that there is no easy way to learn whether the adjacent household resembles the original one precisely, because no data were collected on the original. The substitution may be biasing.
2. Refusal to cooperate. After finding the designated individual at home, the interviewer must interest the person in cooperating. If the time is inconvenient or if the survey appears phony, the designated person may not cooperate.
3. Respondent bias. The interviewer must encourage accurate and thoughtful answers. Some respondents may give inaccurate or biased answers in order to finish quickly or for other reasons.
4. Interviewer bias. Interviewers are capable of introducing a variety of unconscious biases into the interviewing process, through the mere fact of their age, sex, manner, or intonation. In addition, there is the problem of conscious interviewer bias or dishonesty. Interviewers face a great temptation to fill their quota of interviews as quickly or as cheaply as possible. This can be done by not making the required number of call-backs or claiming refusals to cooperate, or, in extreme cases, actually falsifying an interview.*

---

*Kotler (1975)

Targets of Assessment. We have previously identified three targets of needs assessment: learners, communities, and providers. Surveys of each of these areas are being carried out to determine needs. Each has special aspects which should be considered.

Learners. Surveys of learners in a community can be undertaken for a variety of reasons. One may wish to ascertain the perceived needs of those not being served or may wish to find out what public attitudes toward the institution are. Perhaps it is attitudes toward education in general, or toward locations or times which one wishes to survey. Monette differentiates between two diagnostic models for surveying learners: individual self-fulfillment models, aimed at discovering the interests and wants of individuals in a community, and individual appraisal models, aimed at helping learners determine their own needs. The second of these might best be handled in a brokering or counseling framework.

Sometimes a sub-population has been identified and the survey may address itself to that group and its needs. If the subgroup is one already being served, the survey may also serve an evaluative function, as one can ask about the effectiveness and/or accessibility of services for the subgroup.

Cross (1978) provides us with an excellent overview of major learner studies. She concludes that there is considerable agreement in the findings of the studies, which indicates that those wishing to undertake new studies approach them from a point of view different from that used by the authors of existing surveys. Most important, according to Cross, is to take a more thoughtful approach to analysis and data presentation. The need now, she says, "is not for further broad-scale surveys, but for careful, thoughtful analyses of what we know and do not yet know about learner characteristics and what that implies for policy making and for further study." (p. II-56)

Surveys of adult potential clients. Many institutions have used surveys to find out more about their potential clientele. Some which came to our attention were: Brookdale Community College, Los Rios Community College District, West Valley Community College, Los Angeles Community College District, Delaware County Community College, and the Community Colleges of Metropolitan Kansas City.

Community. Four ways of studying community were identified from the literature and telephone interviews.

1. Study of the community as a whole. Blackwell (cited in McMahon, 1970) suggested studying seven interrelated dimensions of the community: population base; institutional structure; value systems; social stratification; informal social relationships; power structure; and (social)ecology. Monette (1977), in his description of diagnostic models, refers to system discrepancy models, which are aimed at discovering the educational needs of social systems. He asserts that only individuals can properly be said to have educational needs, but agrees that system needs may be greater than the sum of the needs of individuals in the system. One of the three approaches to community mentioned by Hand (cited by Lenning, 1977) is viewing it as a social unit involving the spatial and temporal relations of people and ecological aspects.

The classical work by Warren (1965) on community studies is a working manual for those doing such studies. It includes background information about doing surveys and an extremely detailed list of areas to be surveyed:

- setting and history
- economics
- government, politics and law enforcement
- community planning
- housing
- education
- recreation
- religious activities
- social insurance and public assistance
- aids to family living and child welfare
- health
- special groups
- communication
- intergroup relations
- associations
- community organization.

The work of Greer (in press) is designed to help libraries survey their communities in order to determine what services they need and also emphasizes the role of the library as a clearinghouse for community information.

2. Study of the institutions, agencies, and services of the community. This is the second of Hand's 3 approaches to community study. It is also the approach favored by the Michigan State University Institute for Community Development.

   Peterson (1978) presents a comprehensive typology of community organizations: (p. I-41)

A Typology of Community Organizations

1. Multipurpose organizations
   - a. Libraries
   - b. Y's
   - c. Racial/ethnic/national origin organizations
2. Cultural/intellectual groups
   - a. Historical: museums; historical, architectural societies
   - b. Literary: writing, poetry, book-discussion groups
   - c. Public affairs
   - d. Performing arts: theatre, musical groups
   - e. College/university related: American Association of University Women, alumni chapters
3. Personal improvement/awareness groups
   - a. Cognitive development: speed reading, memory improvement, languages
   - b. Psycho-social: personal development, life style, sex role oriented groups
   - c. Effective parenting
   - d. Physical fitness/health
4. Church sponsored organizations
   - a. Traditional adult education programs
   - b. Community issues/action
   - c. Personal/family living
   - d. Services for specific groups: day-care centers, summer schools; senior centers
5. Senior adult groups
   - a. Chapters of national organizations: American Association of Retired Persons, Grey Panthers
   - b. Local groups

6. Youth programs
    a. Scouts
    b. Y youth
    c. Athletic

7. Recreation groups
    a. Dancing
    b. Sports: hiking, skin diving
    c. Games: bridge, scrabble
    d. Garden/horticulture clubs
    e. Other hobbies: miniature railroading, birdwatching

8. Political organizations
    a. Units of major political parties
    b. Units of national issue groups: National Organization of Women (NOW), John Birch Society
    c. Local issue groups: neighborhood association, taxpayer organization

9. Social service organizations
    a. Red Cross
    b. Health-related organizations: American Cancer Society, alcoholism council
    c. Charitable
    d. Humane societies

10. Civic/service clubs
    a. Chapters of national/international organizations: Rotary, ZONTA
    b. Local clubs

11. Fraternal and social clubs
    a. Chapters of national fraternal societies: Elks, Red Men
    b. Local social clubs

As a typology, this one is by no means perfect. The Red Cross could go in several categories, for example, or in the first one. It merely outlines the major types of community organizations, and is in no sense an exhaustive listing of such groups (only two or three examples are ordinarily given for each subcategory.)

3. Study of the educational providers in the community. This aspect of community is frequently addressed by those in adult education. The product of such a survey is usually a directory of some kind. For instance, such a directory is in constant use at the Open Campus at Valencia Community College, where it is used to identify facilities, speakers, and sponsors.

   Such directories are not uncommon. Two interesting examples of taking such surveys one step further are the work of Beder and Smith (1977) and of Nolfi (1973). Beder and Smith look at community resources from the point of view of linkages which will allow agencies to increase their resource acquisition and produce more and better outputs. Nolfi, after identifying alternative educational providers in the state of Massachusetts, described the strengths and weaknesses of each and made comparisons among them on the basis of thier structural and service characteristics.

   Directories of educational activities. Many communities have prepared directories of educational offerings. Among those which came to our attention were: New Hampshire Director of Non-Collegiate Sponsored Instruction; Associated Colleges of Mid-Hudson Area Directory of Continuing Education Resources; Directory of Central Region (NY) Resources; Kansas Informal Learning Directory; and Continuing Education Opportunities for Adults in New York City.

4. Study of education as a partner in community development. McMahon (1970) points to the development away from an individual focus and toward a community focus in adult education. Dave (1976) sees

> education as providing the necessary knowledge, skills, and attitudes to promote community development in rural areas of the world.
>
> The authors advocate an understanding of the community and its needs and of the place of the institution in the community. It suggests that a provider doing needs assessment know what other providers in the community are doing--what they are offering, to whom, and how. It urges institutions to involve themselves in their communities in an integral manner.

The provider. In its surveying activities, the provider sometimes forgets to include itself. This is unfortunate because knowing one's own strengths and weaknesses is as important to a complete needs assessment as any other aspect. Parden (1978) suggests that ongoing organizational analysis be carried out in institutions, using the existing Institutional Research Unit. The analysis is designed to see if current functions can be achieved at lower cost, to determine if greater service can be provided--using the same or higher levels of support, and to describe these alternatives in a manner that will assist decision makers in the institution.

Such activities have long been carried out at Pennsylvania State University by the Department of Planning Studies. The department carries out an annual continuing education inventory, continuous surveys of adult development, and continuing education needs in the professions. In addition, it collects specific information to aid in the administration's decision-making process and assists at the departmental level by delineating and measuring areas of need, presenting information about program needs to decision makers and informing the various deans of continuing education of programs for which a need has been indicated by the findings of each study.

In his community analysis work, Greer includes library self-evaluation and planning for the delivery of library services. For some postsecondary institutions, the ETS Institutional Goals Inventory has proved a helpful instrument.

Lastly, recognition of institutional constraints must be a necessary step in planning. Berlin (1976), deploring the multiplicity of continuing education units at the University of Michigan, nevertheless acknowledges the usefulness of this diversification in maintaining unit autonomy and faculty democracy--prized by the institution. He further recognizes the value for the units of permitting them to maintain direct contacts with the special interest groups they serve.

1. Intelligence Systems

Kotler* uses the term "market intelligence" to describe the way in which the organization's managers are kept current and informed about changing conditions in the environment. He advocates three steps in improving the organization's intelligence-gathering activities:

(1) improve the field force's intelligence activity

(2) utilize additional intelligence resources, and

(3) buy information from special marketing research services.

These steps might well be considered by institutions wishing to assess needs. Step one would involve making all personnel, including faculty, library staff, tellers at the finance office, and maintenance workers, aware of a responsibility to notice people's reactions to the products, administrative procedures, and services of the institution, and to pass on information about such reactions to those who make decisions. Kotler advocates a training program to achieve this objective. Such a program would also have the advantage of involving more staff members in institutional development, with a likelihood of improved morale. The mail delivery worker who receives complaints about delivery times often feels placed in a double bind. Instructed by superiors to follow a certain route, or to do certain chores before starting out on the route, the worker must then accept the complaints of those to whom mail is delivered that the timing is inconvenient. Within an operating system which encourages the worker to report and take some responsibility for such decisions he/she might feel free to pass on the complaint with possible suggestions for improving the service. The payoff for the individual worker is in receiving fewer complaints and perhaps in recognition for suggested improvements in service. Faculty members are in an outstanding position to receive and pass on information about student needs and to suggest ways of meeting them. Another kind of intelligence gathering is carried on in the community. As Gollatscheck et al.* point out, "whereas a thorough analysis may be undertaken only at long intervals, the need for up-to-date information about the community is continuous. The community renewal college must develop systems that allow for a free flow of needed information about the community on a regular basis." The college must make spot checks of various constituencies, monitor certain community data, and use its established links to the community for two-way communication at all times. Ideally, the community renewal college should know as much about daily and weekly conditions in its community as the weather bureau does about weather conditions in its area. To do so, they point out, requires innovation in developing methods of intelligence.

---

*Kotler (1975)

One such method is becoming involved with the other organizations and agencies in the community by serving on joint boards, councils, and committees which involve members of several such groups. It is even possible that the key role in bringing community organizations together in a working relationship will be taken by the institution. This kind of activity brings the institution into direct contact with leaders in the community, keeps the name of the institution before these leaders and their organizations, allows the institution to hear about what is going on in other organizations and thus to anticipate areas in which it might give service, gives the institution an insight into the resources of other institutions and organizations which it might tap into, and helps the institution to learn about economic, social, recreational, political, and educational trends in the community to which it must be sensitive.

---

*Gollatscheck et al (1976)

Although activities of this sort have usually been part of an institution's ongoing work in its community, the systematic collection of information so gathered and the prompt use of such information has often been overlooked. It may be that the college president sits on the Arts and Humanities Council, but does he/she report back to the institution about ways in which the college could move into the community through providing facilities for exhibits, structuring an art appreciation program in conjunction with other council members, and even improving the market for the works of art produced by the college's fine arts graduates?

Several interview respondents mentioned their community involvement as one of their major methods for assessing community needs. Miami-Dade Community College pointed out that their staff is constantly involved in community service activities, with an eye to serving the community directly in action projects as well as determining what the educational needs are which could be served by the instructional program. Community College of Vermont also pointed out the necessity to be active in the community. The need to be responsive to expressed needs was pointed out. If a businessman serving on a committee with a college staff person mentions a training need of his company, the college can increase institutional credibility by taking prompt action to negotiate, design and implement such a program. In many instances, this means circumventing the customary school calendar and being flexible about location of courses.

3. Hearings

A public meeting or hearing may be convened in order to discover the needs for education among adults in a community or a smaller group. An important aspect of such an activity is publicizing it so that all concerned parties have an opportunity to be heard. Often, testimony is taken in a formal manner. This may be in oral or written form. Invitations may be issued only within the community or in a broader geographical or substantive area, to include outside experts.

A meeting might be held to assess needs in a smaller community, such as a chapter of a professional association. The recording of needs presented in such meetings must be done with care equal to that used for larger meetings.

One difficulty with collecting information in this manner is that the form of the information will not be standardized. Content analysis techniques will be needed to categorize suggestions and responses for purposes of analysis.

A current example of the use of public hearings to collect needs information is the project sponsored by Bergen Community College with several other community and state agencies. Public hearings constitute a critical part of their county-wide Needs Assessment Project. Members of the public and representatives of organizations and agencies which provide human services to adults are invited to provide testimony. Over 300 invitations to testify were sent to individuals, agencies, and organizations. The results will be included with other information on needs collected by the project through other means.

4. Delphi Technique

The Delphi technique is a procedure for developing consensus about forecasts. It has the advantages of group input without the usual disadvantages: social pressure to agree, problem or dominant members, and the tendency to overemphasize the need for agreement. In a Delphi procedure, the group members (panel) are anonymous, and interaction is carried out through iterative responses to questionnaires (rounds), usually mailed. The output is a forecast with certain statistical analyses built in, such as a median and four quartiles.

The first round is usually unstructured. The results will need to be categorized and structured into statements. The second round contains these statements and the panelists are asked to prioritize them or predict a date by which they will be realized, or rank them in some other way. During succeeding rounds, panelists receive questionnaires marked with the medians and quartiles indicating where other panelists stand in relation to their own responses and are invited to modify or justify deviant positions.

The use of the Delphi to predict needs has the advantage of using the expertise of a scattered group of experts. A possibly questionable aspect might be that the very panelists who are making predictions may be influential in the realizing of those predictions.

One example of a Delphi needs assessment is Rossman and Bunning's* survey of adult education professors, predicting adult educators' needs for knowledge and skills in the future.

5. Trend Projection Techniques

An important compiling technique is based on the extrapolation of past phenomena as a way of predicting a future situation. This technique relies on the assumption that the future will look essentially like the past. It requires the existence of valid and reliable information from the past upon which to build projections.

Several kinds of techniques are included in this category. Recent computer forecasts of great complexity, including Forrester's World Dynamics Model, are actually sophisticated combinations of trend projections.

The reliability of some of these techniques can be tested by seeing if projections made by means of them have been valid. Many such methods have been in use long enough for this type of verification to be possible. Confidence in a technique can be built through relating its present use to its previous history and reliability.

The outcome of such techniques is usually a set of alternative futures, for instance, a high and a low curve, which allow the decision maker a variety of options.

Trend projection techniques have been used for a variety of demographic variables, such as income and population, and these projections have been used to make further inferences, such as enrollment projections. An example of trend projection recently came to our attention: Delaware County Community College in Media, Pennsylvania contracted with the Pennsylvania Economy League to have academic enrollment projections prepared, which could help them in their needs assessment activities.

Criteria. Five criteria for the selection of a method of collecting information about needs are:

1. it should involve broad participation,
2. it should be comprehensive, cyclical, and repeating,
3. it should have been extensively field tested,
4. it should be easily replicable, with adequate supporting manuals and need minimal technical assistance to carry it out, and
5. it should require minimal and reasonable cost.

The method comparison sheet may prove useful in deciding among alternative methods.

METHOD COMPARISON SHEET

Rate this method in terms of
  validity
  reliability

Is the method suitable for the information you wish to collect?

Is the method highly complex?

If so, are the potential results worth the effort?

Is the method applicable to the institution, its needs, resources, etc?

What will it cost to use this method?

in money: fees and salaries
travel and accommodations for information collectors
office expenses
dissemination and implementation

in personnel: time in planning
time in collecting information
time in analyzing information
communicating to others
implementing (or rejecting findings)

in potential problems: invasion of respondents' privacy
impact of findings may be threatening to staff
psychological impact may be negative
may engender defensiveness in faculty, etc.
may generate controversy in community

What are advantages of method?

Possible positive side-effects: publicity for institution
contact with institutional representatives

Cost-effectiveness: possible use of one method to serve two purposes

Where else has method been used?

With what results?

What is needed to carry out this method?
  support services
  institutional resources?
  training facilities?

Who should collect information?

Many adult educators believe very strongly that their expertise in their subject field is a strong argument in favor of their collecting their own data. However, those specializing in survey methodology usually claim that expertise in designing and carrying out data collection activities is more important than subject matter knowledge. The question of who collects data is very important.

The possibility of using an inside director with assistance from consultants should be considered. Also to be considered is the use of an advisory committee. The combination of a survey firm and an institution has proved highly successful in some cases (Los Rios/Gallup; Brookdale/Don White.) In choosing a person to collect data, the following checklist may be useful.

DIRECTOR COMPARISON SHEET

What is the person's background?

- Education
- Experience with
- Previous success?

What is the person's orientation?

- Is this person's style compatible with that of the institutional personnel?

- Is this person's orientation in tune with that of the institution?

What methods has this person used before?

- Is (s)he familiar with the method(s) chosen?

What are the ethical and legal responsibilities of the n/a director?

Should the n/a director come from within the institution, or from outside?

If from outside, what responsibilities remain with the institution?

If from inside, what technical assistance is desired and desirable?

How often should information be collected?

The frequency of collection is, of course, related to the method chosen. Survey information is valid for a relatively short period of time. Directories are usually updated at least annually. But large-scale surveys cannot be repeated frequently because of expense. However, some methods are continuous and ongoing in nature. In a sense, information must be collected in one form or another on a constant basis in order to keep current.

EXERCISE

Identify three or more methods you might use to assess needs.

Complete a Method Comparison Sheet for each.

Compare the methods.

Which method or combination of methods would best suit your needs assessment?

Identify several possible directors for your n/a.

Complete a Director Comparison sheet for each.

Compare Directors.

Which Director would best suit your n/a?

How often should this information be collected?

Should a longitudinal study be considered?

VIII. ANALYSIS

Lenning (1977) and Cross (in Peterson, 1978) point out the need to go beyond collecting information and into the difficult search for explanations. In fact, as Boyd and Westfall (1972) point out, all previous steps are undertaken for the purpose of the analysis, from which conclusions, recommendations, and decisions will emerge. Drawing meaningful conclusions from the information collected is a process of discovering associations, relations of magnitude, and patterns of correlations using techniques ranging from the simple computation of averages to sophisticated statistical manipulations. However, few analyses go beyond the simplest statistical treatments, often leaving the needs assessment process open to criticism.

In deciding how the information is to be analyzed, the first factors to be kept in mind are the goals and objectives. The results of the analysis must satisfy the goals and objectives of the needs assessment. Although analysis may reveal unexpected trends, it must first answer the questions it was designed to answer. If the needs assessment was undertaken to aid in deciding whether to offer a beginning Spanish course in the evenings, analysis must first be directed toward answering that question before undertaking further analysis, such as requests for intermediate Spanish.

Next, the audience must be considered. If a certain statistical procedure is meaningless to a given audience, there may be less justification in using it. If an audience has a high degree of statistical sophistication, however, it may be highly effective from a credibility point of view to attempt multivariate analysis.

It is also well to remember the possible uses of the analysis. Although this is intimately related to the goals and objectives, there is a slight difference in the concept. The analysis should be geared toward implementation. Statistics with mathematical interest only are of questionable value, while those which indicate true correlation or possible causality are extremely desirable because they can lead to reality-based decisions.

Steps in Analysis

The steps in analysis follow a logical sequence:

1. The information must be coded, or ordered into meaningful categories. The selection of these categories usually takes place during the construction of the information collecting instrument. However, open-ended questions require the analysis of content for the development of categories. Tallying is usually done at the same time as coding. This involves counting--manually or by machine--the number of responses in a category.
2. Simple calculations are performed on the information to yield relevant averages and measures of dispersion. These serve also as summaries of data within a category as well as facilitating further analysis.*

---

*Harris, Yeuell. Community Information Handbook (Washington, DC: NCES, 1978, 3rd draft).

3. Comparisons are made between categories. Cross-tabulations are performed and useful tables are constructed which allow comparisons. In this stage, several possible alternative "explanations" of the results may emerge. Statistical tests of significance are often performed at this stage in order to determine whether variations could be the result of chance or are attributable to the independent variable.

ANALYSIS AND INTERPRETATION OF DATA

After the survey has been completed, the data must be put in a meaningful form. Analysis consists of establishing order in the data so that interpretations of the findings can be made.

Each item on the questionnaire should be analyzed. The first step in this process is to code the data. As mentioned earlier, coding consists of putting the data into meaningful categories and tallying the number of responses in each category.

Structured questions are easier to code than nonstructured questions. Structured questions can simply be tallied by response category. Unstructured questions such as open-ended opinion items are more difficult to code because meaningful categories must be established before tallying can begin. To establish these categories, it is necessary to analyze the responses and create categories based on similarities in the content of the responses.

After coding and tallying have been completed and the format for displaying the data can be determined, the interrelationships between the items can be explored.

For example, if demographic data has been included in a survey designed to determine why school levies fail, the interrelationship between the demographic data and the other questionnaire items can be explored.

	Favorable to levy	Unfavorable to levy	Total
People without Children	45	55	100
People with Children	150	250	400
Total	195	305	500

The researcher may also decide to break these data down even further:

People with Children	Favorable to levy	Unfavorable to levy	Total
People with Children in Public School	130	210	340
People with Children in Private School	20	40	60
Total	150	250	400

These data may also be analyzed in a different manner:

	Favorable to levy	Unfavorable to levy	Total
People who own their own home	95	205	300
People who rent	100	100	200
Total	195	305	500

The interpretation process involves determining which factors appear to be most important in explaining the results of the survey. In the above examples, the researcher is attempting to find the best explanation (or explanations) of why school levies fail. He/she explores various possible explanations to discover the one (or ones) that prove to be the most significant.

To determine whether the findings describe significant differences in the population, the researcher would probably use what is called a statistical "test of independence." Such tests help to determine whether the findings differ significantly from what could be expected by chance and give the researcher a check on the visual interpretation of the data.

There are many different ways of displaying data. Different forms of graphic presentations may be used-- bar graphs, trend lines, pie charts, etc. The data may also be put into verbal form. The following two examples selected from Inforet (Information Return) illustrate how a simple finding can be meaningfully interpreted and linked with implications for follow-up action.

> Nationally 26 percent of the public feel that discipline is the biggest problem in the schools of their community. In a survey 76 percent indicated that lack of discipline is one of the things they like least about their schools. If it is the philosophy of the district that external discipline is diminished to permit the development of self-discipline, this idea should be implied in all school communications.
>
> Response to an item, "how many new students would you say enroll in our district each year?" indicates that only 23 percent of the school voters realize how rapidly the district is growing and cannot understand the need for buildings. The geographic spread of this district makes it impossible to see growth. Frequent stories in the local weeklies plus an item in each issue of the newsletter on the child count this month as opposed to last year would make people more conscious of this problem.[1]

---

[1] Oakland Schools, Pontiac, Michigan. Inforet. 1970. p. 28.

Reporting, discussion and planning for action should take place as quickly as possible after the survey, and these processes should include the widest possible representation of citizens and professional educators.

BIAS

Bias distorts the results obtained from a survey. The following chart can alert the surveyor to potential sources of bias in a survey.

POTENTIAL SOURCES OF BIAS IN A SURVEY

Stage of the Survey	Potential Sources of Bias
1. Sampling	A. Faulty methods of drawing a sample B. Population list incomplete C. Sample size not adequate D. Inadequate definition of the population
2. Questionnaire	A. Faulty question design 1. Wording and sequence 2. Leading questions 3. Misunderstood questions 4. Questions which the respondent does not have enough information to answer B. Untruthful respondents
3. Interviews	A. Interviewer bias B. Inproper recording of responses C. High non-response rates D. Missing data in completed interviews
4. Analysis	A. Incorrect editing and coding B. Use of statistics inappropriate for the data C. Arithmetic errors

There is a potential for bias at every step in the survey process. The utmost care should be taken at every step to obtain results that will be useful and representative of the opinions of the population. Pre-testing a questionnaire on a limited number of individuals can illuminate many of the pitfalls in questionnaire construction.

CHAPTER 7

AN OVERVIEW OF STATISTICAL ANALYSIS

INTRODUCTION

Statistical data are highly quantitative and as such it is possible to use a range of mathematical techniques to manipulate and analyze them. This chapter is divided into three sections. The first deals with techniques of analysis and some key terms. The second provides an overview of two common examples of mathematical applications of statistical community data to various decision-making problems: enrollment projections[1] and site planning. The last section of this chapter deals with automating a school's information system.

TECHNIQUES OF ANALYSIS

Population data in their natural form consist of raw numbers: numbers of people in various categories or numbers of events. Some purposes require only raw numbers. For example, only raw numbers are needed to tell whether New York City or Los Angeles is the bigger. But sometimes raw numbers are not enough. Some systematic method of comparing one number to another is needed. For example, it might be useful to know the size of the school-age population relative to the number of households or the number of deaths in relation to the size of the population. The easiest way to do this is through a *relative* number, a single number that specifies the relationship between two numbers. There are several types of relative numbers: ratios, proportions, percents, and rates.

Ratios are the most basic relative numbers. They simply express the relationship of one number to another. For example, in the United States in 1960 there were 55,786,000 children under age 15. There were 96,979,000 people from ages 15 to 64. If a summary number were needed that would express the relationship between children and economically active adults, then a rough estimate could be derived by dividing 55,786,000 by 96,979,000. This gives the *ratio* of children to the economically active population, in this case .575 children per economically active person. To avoid fractions simply multiply both sides by 1000 to get a ratio of 575 children for every 1000 economically active adults.

Proportions are a particular kind of ratio. In the ratio above, the two numbers were separate entities. In a proportion again there

---

[1] References for these methods can be found in the Guide to the literature under the heading SCHOOL ENROLLMENT PROJECTIONS.

BEST COPY AVAILABLE

are two numbers, but this time one of the numbers is part of the other. In the example above, if the relation between the number of children under age 15 and the total population in 1960's is needed the single number that gives this relation is derived by dividing 55,786,000 (the number of children under 15) by 179,323,000 (the total population). The result is .31 the proportion of the United States population that was under age 15 in 1960. A proportion always shows a part in relation to its whole; therefore, the part is always divided by the whole, and the result must always range between 0 and 1.

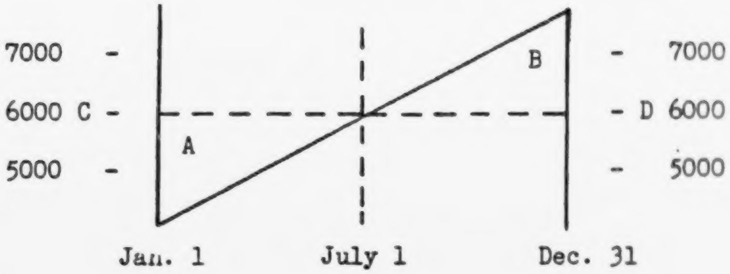
Percents are simply proportions that have been put into a more convenient form. They are derived by multiplying the proportion by 100, which reduces the number of decimal places. In the above example the proportion of children under 15 in the United States in 1960 was .31. This result multiplied by 100 yields 31 percent of the United States population under age 15. The term percent means that 31 out of every 100 people in the United States are under age 15.

Rates are ratios that have a time dimension. The ratios, proportions and percents computed above assume a given point in time. This is essential for describing the structure of the population. To look at processes, however, the time dimension must be added. The usual unit of time used in population work is one year. The rate expresses the relation between a number of events and some base number over a given period of time. For example, the ratio of deaths occurring in a given year to the average size of the population in that year is the death rate. For example, in 1960 there were 1,702,000 deaths. If this figure is divided by 180,676,000 (the average size of the United States population in 1960), the result is a death rate of .0094 deaths per person per year. This figure is relatively difficult to interpret. Multiplying both sides by 1000 converts the death rate to 9.4 deaths per 1000 population per year.

In this latest example 180,676,000 was used as the United States population, whereas in earlier examples 179,323,000 was used. The reason for this illustrates a useful point. The Census was taken as of April 1, 1960. In computing the rate the average number of people in the United States in 1960 is needed. The United States population is growing; therefore the population at the end of 1960 was considerably larger than at the beginning of the year. A convenient way to get the average number of people in a population during a year is to simply take the population in the middle of the year as the average. Figure 7-1 shows why this works.

Sometimes, summarizing is more important than comparing. This is particularly true with regard to the composition of the population. How can the age, income, or education of an entire population be summarized? This task requires the use of measures of central tendency. The three common ones are the mean or arithmetic average, the median, and the mode.

Figure 7-1



If the population increase after July 1 (B) is transferred to the population from January 1 to July 1, it fills the area A, then the population would be at a constant level (CD) for the year. The midyear (July 1) figure of 6000 is therefore the same as the average population for the year. Thus, to get the midyear population of the United States in 1960, the population beyond the April 1 figure of 179,323,000 had to be increased. The result was a figure for July 1 of 180,676,000. The point is that in dealing with yearly rates, Census data, since they are always for April 1, will have to be modified to get the midyear population.

In population work the median is by far the most frequently used, and with good reason. The median is the point in a frequency distribution that splits the distribution into two equal halves.

Table 7-1 depicts the earnings distribution for a hypothetical architectural consulting firm. There are 28 employees including the president of the firm who also gets a salary. The table shows that the salary that splits the distribution into two equal parts is $15,000 per year; this is the median salary for the firm. The mode is the category in a distribution with the highest frequency. In the example the mode is not much help since three different salaries have the same frequency. A distribution can have more than one mode, and this is the main reason why this measure is seldom used with population data. The mean is the arithmetic average, and in this case is computed by multiplying the salary by the frequency, summing these products and dividing this sum by the sum of the frequencies. The answer we get is $31,892.86. This is the mean salary for the firm.

In the example there is a great deal of difference between the median and the mean. The mean is twice the size of the median. Which is the better measure? Remember that the object of this exercise was to provide a summary number that would describe the entire population. Keeping this in mind, there is no doubt that the median gives a better summary of the total picture. The typical person in this firm does make around $15,000 per year. At $31,892.86, the mean salary is higher than the salaries of 24 of the firm's 27 employees. Certainly this does not summarize the salary picture for the firm very well.

The reason that the median is a much better measure for summarizing an entire distribution is that it is not unduly influenced by extreme values whereas the mean is. The example is an unusual case: the president gets a salary far greater than any of the other people in the firm. This single extreme value caused the mean to misrepresent completely the entire salary distribution, but at the same time it had no effect on the median. As a matter of fact, as long as the president's salary is at least $20,000 his salary would have no effect on the median whatsoever. It is for this reason that the median is almost always used to summarize distributions of population data.

4. Multivariate analysis, such as multiple regression analysis, factor analysis, and cluster analysis, may be applied to the collected information in order to further refine the correlations and possible causations inherent in the information. Although the attempt to reach explanation cannot be overemphasized, the multivariate analysis does require statistical expertise both in its use and in the interpretation by the audience.

Secondary Analysis

The further analysis of information collected by others is called secondary analysis. (Glass, 1976)

ANALYSIS COMPARISON SHEET

Method of analysis:

Desired output:
  What kind of output is desired?
    (e.g., was the objective to publish a directory?
    to alter curriculum?
    to evaluate administrative procedures?)
  Will this technique lead to this output?
  What other

Expertise and equipment:
  What expertise is needed to perform this technique?
  What equipment, hardware or software is needed?
  Are the expertise and equipment available?
  Inside or outside the institution?
  Within the budget?

Sophistication of results:
  Will the resultant analysis be meaningful to the intended audience?
  Will the analysis be sufficiently sophisticated to bear credibility with the intended audience?

Appropriateness:
  Is the technique appropriate to the information collected?
  Is the information largely quantitative?
  Is the information largely qualitative?

Suitability:
  Can the technique answer the following questions:
    What are the components/causes/correlated of needs?
    What relevance does the information have for program design?
      administrative planning?
      communication?
      teaching?
      extra-institutional change (e.g., city transportation)?
    What are the educational and non-educational parameters of the needs identified?

Flexibility:
  Can the technique be modified to accommodate alternative analyses?
  Is the analytic team able to be spontaneously responsive to new ideas as they emerge?

EXERCISE:

Identify three or more analytic techniques you might use in your needs assessment.

Complete an analysis comparison sheet for each one.

On this basis, select one or more methods of analysis you could best use to reach your objectives with your intended audience.

IX. REPORTING

Reporting about needs assessment does not begin only after the analysis is complete. The institution which keeps its publics informed about needs assessment on a continuous basis is increasing the cost effectiveness of its activities by having them perform a public relations function as well as assessing needs. Thus, a news release regarding an upcoming or ongoing survey notifies the community that the institution is interested in people's interests and needs and presents an image of responsiveness. This news release will probably reach a larger audience than the survey itself and may, in fact, break ground for the information collectors when they call on respondents and reduce the number of those who refuse to respond.

Once results have been analyzed, they must be shared with the various audiences mentioned earlier. Reports to these audiences may be in oral form or may be written. They may take place as progress reports, throughout the period of information collection and analysis, or may appear only as a final report at the end of the process. Either a general report or specific ones (or both) may be issued. The report(s) may be technical or nontechnical. The function may be descriptive, judgmental, or recommendation making.

Some methods for reporting needs assessment information include: case studies, scenarios, multimedia presentations, journalistic pieces, brochures, or lengthy printed documents. They may advocate a certain position strongly, or take an adversarial position with regard to the material presented.

Case studies

Case studies can be used to report needs assessment information. They might be in the form of a description of an institution, its activities, its work in the needs assessment area, and the use of needs assessment information. They might involve studies of individuals -- what their needs are and perhaps how those needs might be satisfied. They might detail the educational and other needs of a community and show how they might be satisfied, including how needs other than educational needs might be met through educational programs.

Scenarios

Scenarios are often used to project possible alternative futures as a way of reporting needs at a future date. For example, after determining what present needs are and using trend analysis, two or more possible scenarios for the future might be developed and then intervening steps could be invented to bring about the desired alternatives.

Multimedia presentations

Sometimes a presentation can be made before live members of the audience or can be prepared on film or videotape or cassette. The reporter has the opportunity to use photographic material, graphs and charts, and to set the presentation in the form of questions and answers, and otherwise make the material highly interesting and involving for the audience.

Journalistic pieces

Pieces to be released through the newspapers, newsletters, or journals attempt to provide information about the needs discovered, the ways in which these needs were ascertained, and the significance of the findings. Depending upon the medium and the intended audience, these may need to be brief or detailed, technical or unsophisticated, specific or general.

The most important single question to be kept in mind about reporting is, "What is the best way to report these findings to this audience?" If the audience is the general public and the findings are survey results, the report must appear in terms suitable to laymen and in a medium which will reach many people. Perhaps a feature article in the newspaper is the best reporting method. Perhaps a television spot with the major results summarized quickly, together with information about registration, is the best way to publicize the findings. If the audience is a foundation or other funding source, the report may need to take a specific form prescribed by them. However, it might be well to consider other kinds of reports of such needs assessment. For instance, if a survey or other assessment of needs is performed in conjunction with a grant proposal, consideration should be given to publicizing the results in the newspaper or in a report to the governing board or to a community council.

The audience must always be kept in mind. The suitability of the language, of the kinds of statistics reported, and of the length of the report, all depend on who the intended audience is.

Also of great importance are the goals and objectives of the needs assessment. The report must be in a form which will further those goals and objectives. It should be in a form which will encourage use of the information.

Some material from the Community Information Handbook is enclosed for further information.

The following Reporting Comparison Sheets may be valuable for deciding among alternative methods of reporting.

BEST COPY AVAILABLE

REPORTING THE RESULTS *

How to report survey results to the community is a political issue. The following factors might be considered:

1. People generally like to have their opinions sought. It flatters them to feel that someone really cares about what they think and that their suggestions will be taken into account when important decisions are made.

2. Surveys often reflect substantial support for schools and what they are trying to do. Publicizing such sentiment tends to build morale, loyalty, and respect. It also tends to inhibit irresponsible criticism.

3. Frank and open recognition of limitations revealed in surveys can build confidence and respect for school administration, especially when it is followed by remedial measures.

4. Any recent survey is an excellent vehicle for promoting discussion and expanding community understanding.

Periodic Reassessment

Community attitudes and beliefs are subject to sudden and constant change. People come and go, issues shift and people change their minds. Periodic surveys are essential if information is to be current. In order to compare and assess trends, follow-up surveys should use the same questions, if possible. This assures that the responses on later surveys will be comparable to earlier responses. Then comparisons can be made between two or more surveys to assess the differences in responses and analyze trends.

Since opinions change, priorities shift, and new ideas surface, periodic assessments are a good way of constantly keeping in touch with the changing nature of the community. Keeping questions consistent is an excellent way of getting comparable results.

---

*Harris, Yeuell (1978)

REPORTING THE RESULTS *

How to report survey results to the community is a political issue. The following factors might be considered:

1. People generally like to have their opinions sought. It flatters them to feel that someone really cares about what they think and that their suggestions will be taken into account when important decisions are made.
2. Surveys often reflect substantial support for schools and what they are trying to do. Publicizing such sentiment tends to build morale, loyalty, and respect. It also tends to inhibit irresponsible criticism.
3. Frank and open recognition of limitations revealed in surveys can build confidence and respect for school administration, especially when it is followed by remedial measures.
4. Any recent survey is an excellent vehicle for promoting discussion and expanding community understanding.

Periodic Reassessment

Community attitudes and beliefs are subject to sudden and constant change. People come and go, issues shift and people change their minds. Periodic surveys are essential if information is to be current. In order to compare and assess trends, follow-up surveys should use the same questions, if possible. This assures that the responses on later surveys will be comparable to earlier responses. Then comparisons can be made between two or more surveys to assess the differences in responses and analyze trends.

Since opinions change, priorities shift, and new ideas surface, periodic assessments are a good way of constantly keeping in touch with the changing nature of the community. Keeping questions consistent is an excellent way of getting comparable results.

---

*Harris, Yeuell (1978)

USE OF MAPS TO DISPLAY INFORMATION

Maps can serve as one of the most useful ways to display community information and to illustrate interrelationships among various phenomena.

Once a suitable base map of the community is obtained, various trace maps can be made from it. One useful technique is to make overlays on transparent plastic to show various relationships among such factors as transportation arteries, population density, ethnic concentrations, and open areas.

The list of types of information that can be displayed on community maps is endless, but the following are illustrative.

- Location of "blighted areas"
- Various land-use zones
- Location of traffic accidents
- Safest routes to schools
- Population density/sparsity
- Availability of housing
- Traffic flow or transportation routes
- Locations of industries by type
- Areas gaining and losing population
- Voter records by precincts on specific issues

Once developed, such base maps are easily converted to various forms for projection or enlarged for presentation to groups.

REPORTING COMPARISON SHEET

Reporting method:

Who is the audience for this report?

Is this reporting method suitable to this audience?
  In language?
  In length?
  In sophistication?
  Does the audience have access to the medium used?
  Can the information be implemented by the audience in this form?

Is this reporting method suitable for reaching the goals and objectives of the needs assessment?

Is this reporting method appropriate to the information being reported?

What expertise is needed to produce the report?
  Writing skills
  Speaking/presentational skills
  Rhetorical skills
  Artistic skills

Who has this expertise? Should the report be prepared in-house or should consultants be used?

What will this reporting method cost?
  In money?
  In personnel?
  In other impacts?

EXERCISE

Identify several possible report types, methods, and/or formats you might use.

Prepare a Reporting Comparison Sheet for each.

Compare reporting methods, etc.

Decide on one or more report types, methods, and/or formats.

X. USE

The single most important shortcoming of needs assessment lies in the use of the information that is collected. Needs assessment has been criticized as wasteful because it is done to satisfy a mandate or is done as an end in itself, and little or no use is made of the information (Phillips, 1975; Peat, Marwick & Mitchell, 1978). Where analysis has been done, it has frequently suggested solutions at the regional, state, or federal level, leaving the institution without a good model for its own use.

Criticism of needs assessment is intimately tied to the question of whether it is a product or a process. If it is a product, the justification for doing it is the reporting of information that has been collected and analyzed.* But, if needs assessment is viewed as a process--a subsystem of the management process--then it can only be justified if it feeds into management and influences decisionmaking concerning goals and policies, the planning and development of programs and services, the acquisition and allocation of resources, and the evaluation of performance. In short, needs assessment activities should result in information useful for the management of postsecondary educational institutions.

In this section we discuss the complexity of the issue, indicators of use, a model of needs assessment in the management process, areas in which the information may be used, the impact of use, and some examples.

---

*As noted under the "Analysis" section, much criticism has been leveled at the superficial and incomplete analysis of needs assessment information that is available.

Complexity

The issue of whether needs assessment information influences management decisions is complex and often difficult to ascertain. As discussed in the "Goals and Objectives" section, needs assessment activities may serve a variety of purposes. On the one hand, needs assessment activities may be undertaken for the purpose of supporting or confirming a predetermined position, e.g., justifying an institution's existing programs and services. On the other hand, they may be undertaken for the purpose of examining and selecting the programs and services which an institution should offer. In both of these cases, needs assessment information may be useful and influential. The difficulty lies in ascertaining whether and to what extent needs assessment information influenced the decisions that are reached. Where the purpose is program and service justification, needs assessment information may confirm or deny the relevance of needs which the institution is serving. In the case of selecting new programs and services, needs assessment information may be combined with other information, tradition, and professional opinion in setting priorities. In both instances, however, the emphasis must be on the actual use of the results--the focus must be on the pay-off.

To some extent, all needs assessment implies change or the potential for change. This means that considerations about the innovation diffusion and adoption process must be kept in mind in dealing with the use of needs assessment results (Rogers & Shoemaker, 19). Resistance of staff members to change can best be overcome through careful attention to the communication process, the identification of barriers to and facilitators of adoption, and recognition of early adopters who may be influential within the institution.

Of course, information about needs is most likely to be used if the costs invested are counterbalanced by potentially beneficial results.

Indicators

The question of use is further complicated because it is extremely difficult to tell whether information has been used. For instance, if an institution had decided to add a certain program and had undertaken a needs assessment survey to justify the addition, it may seem that the program was added as a result of the needs assessment survey, whereas it probably would have been added without the survey. On the other hand, if such a program had been planned (but not announced), and the survey had shown no interest, a decision not to implement the program might have gone unrecognized as a use of survey results.

Such examples show the difficulty of identifying indicators that needs assessment information is being used. It might, in fact, be argued that such information is being used more than is presently thought, because it is impossible for outsiders to know about intentions and other conditions existing prior to the formal or informal assessment of needs.

Model

A theoretical model of the use of needs assessment information in the management process is shown in Figure X-1. The figure depicts the inputs from learner, community, and institutional assessment into institutional management. It maps a process which uses learner, community, and institutional assessment as input into the management process.

Figure X-1. Management Tasks in postsecondary Institutions as Influenced by Items of Information about Needs.

Mgt. Tasks / Targets of Assessment	Determining and Clarifying Goals and Policies	Designing and Developing Activities	Acquiring Resources	Allocating and Reallocating Resources	Implementing and Monitoring Activities	Evaluating Performance
LEARNERS	Consider unmet needs and changing nature of needs in setting goals and policy	Design activities for which learners express preferences, interest, and need.	Acquire resources consistent with expressed needs Consider learners as potential sources of resources.	Allocate resources where learners indicate interest, demand	Satisfy learner needs, interests, preferences	Set criteria for determining institutional impact on learner; relate evaluation to need/demand
PROVIDER	Define mission, role, scope, goals, and objectives with input from self-assessment	Translate goals into activities: continuing new modified	Identify sources, design plans for acquiring resources, and implement plans	Determine allocation process and accountability for resources allocated	Attract and serve clientele; coordinate activities. Bring administrative capabilities of institution to bear on problem	Perform outcome studies, cost studies, and identify indicators of institutional performance. Relate to mission, role, and scope
COMMUNITY	Identify goals in relation to other providers including adequacy of service, nature of service, other community needs	Entertain potential services and collaborative activities in community	Seek potential sources of resources in community: human physical financial Use linkages to enlarge resources	Set criteria for allocating resources based on competitors' offerings and community needs	Contribute to community resource pool; operate and promote activities as part of community	Devise criteria for determining institutional impact; How does performance relate to adequacy of supply in community? Do community impact studies

Areas of Use

Witkin (1975) asserts that needs assessment can result in four kinds of output:

1. A collection of statements of human need
2. A collection of statements of human need in rank order
3. A collection of statements of human need with diagnostic statements and inferences of causes.
4. A collection of statements of human need in rank order and with diagnostic statements and inferences of causes

We suggest that a fifth output is possible and desirable. That is,

5. A collection of statements of human need in rank order, with diagnostic statements and inferences of causes and with suggested remedies.

These statements, inferences, and remedies may be identified with the major areas of institutional management shown in the model: determining and clarifying goals and policies, designing and developing activities, acquiring resources, allocating resources, implementing and monitoring activities, and evaluating performance. In addition, certain extra-institutional uses may be found for them. Specific objectives from Lenning's (1977) literature review, and from our own review of literature and interviews can be grouped into these areas as follows:

1. Determining and developing goals and policies
    - to explore trends in need conditions
    - to provide priorities for special clientele groups such as the handicapped
    - to involve the community in planning so that there will be community support for the policies

- to provide a means for deciding on the educational objectives most appropriate for a particular situation
- to focus attention on salient problems and thus facilitate planning decisions about program development, modification, and efficient utilization and allocation of time, effort, and resources
- to provide justification for focusing attention on some needs but not others
- to allow many relevant people who are not educators, including recipients of the services, to contribute to the planning process
- to assist policymakers to understand which problems are most acute, which will aid policy formulation (League of California Cities, 1975)
- to increase validity, reliability, and accountability in planning and other decisionmaking (McCaslin and Love, 1976)
- "to juxtapose an open, public agenda against the hidden or specialized agendas of decision makers" (Baumheier and Heller, 1974, p. 3)
- to justify one's existence within a larger institution (Beder, 1977)

2. Designing and developing activities

   - to discover institutional and program strengths and weaknesses for program planning
   - to provide guidance for renewal in the institution
   - to provide guidance for making defensible, cost-effective choices among program alternatives
   - to provide an essential component of an information base that will yield data for decisionmaking
   - to provide baseline information which can serve as a benchmark against which to compare later studies
   - to prepare planning documents and requests for proposals

3. Acquiring resources

   - to elicit general public and institutional support (Medsker, 1975)
   - to promote faculty interest in programs (Medsker, 1975)
   - to get more students

4. Allocating resources

   - to provide direction for priority-setting that will aid in allocating amounts of scarce resources

5. Implementing and monitoring activities

   - to discover unexpected or hidden needs that have resulted in ongoing problems
   - to improve institutional functioning (Higher Education Management Institute, 1977)
   - to affect image and perceptions of the community about the institution or educational systems (Keim and others, 1975)
   - to assist in communicating a compelling picture to the community, governing boards, and funders

6. Evaluating performance

   - to discover variations in how different groups perceive that the institution is doing its job
   - to explore causes of loss in public support and help set priorities for corrective action
   - to establish criteria for the evaluation of programs
   - to pinpoint problems and systematically study needs as indicators of interrelated problems
   - to separate symptoms from underlying problems

7. Extra-institutional uses

   - to identify areas of concern requiring research and development of national and regional centers or labs
   - to guide the activities of national professional associations
   - to identify state-level problems and needs in a particular area of education (McCaslin and Love, 1976)
   - to forecast manpower needs
   - to create demand for education leading to the fulfillment of social objectives (Phillips, 1975)

Specific objectives of needs assessment will probably tie in with one of these areas of use. Clarifying this tie-in early in the needs assessment process will help the institution make use of needs assessment information.

Impact of Use

Using needs assessment information in management can have impacts of various kinds. These can be considered as costs or benefits.

Costs. Implementing results of formal or informal needs assessment has both short-run and long-run costs. These costs may be calculated in dollars, in personnel, or in other intangibles. For instance, short-run start-up dollar costs of a new business skills program might be in the amounts needed for new salaries, classroom rental, instructional materials, and promotional activities. They might be in personnel costs for program planning and implementation. They might be less tangible, such as support services including library use or demand for parking facilities. Long-run costs would include ongoing salaries and facility maintenance, staff development, and evaluation and other monitoring activities.

Often not considered are the costs of discontinuing a program. For instance, if a community needs assessment should reveal that there were already enough institutions offering Beginning French, the decision might be made to discontinue that offering. Immediate costs would be in tuition dollars and in cutting back faculty. Other kinds of costs include the negative consequences of a decision. The addition of a course for the handicapped might produce a demand for facilities which it would be difficult to satisfy, and for extended counseling and guidance services. Intangible costs might lie in the area of contact with students, which often leads to their taking more courses at the institution. Thus, discontinuing one course might lead to further loss of students.

Benefits. The benefits of introducing a new program in business skills might be, in the short-run, increased revenue in tuition; the employment of additional faculty--a benefit to the community--and the enhancement of the institution's image due to its having responded to community demand. In the long-run, the benefits may include the contribution of new faculty to the university community and the enrichment of the workforce as graduates enter the labor market.

In some instances, the benefits may be anticipated, but unanticipated benefits may accrue to the institution, the learner, or the community. For instance, the learner may find that association with other students is an intrinsically satisfying experience. The institution may discover that its response to community demand in one area may increase its credibility for responsiveness and it may find more segments of the community approaching it with requests for further offerings.

Examples

Peat, Marwick & Mitchell suggest that a way of influencing institutions to use the results of their surveys in the decisionmaking process is to show examples of how some institutions have successfully taken this step. A few examples found in our literature search and interviews follow:

> The Colorado survey contained a component to be carried out by the Center for Research in Education, which was to use the survey information and feed it back into the education system.
>
> Spikes (1978) modeled the system of continuing education for nurses as a needs subsystem, feeding into an advisory committee, which then sets a delivery system in operation to satisfy the needs.

The State of Maine is implementing its Title I program in three stages: needs assessment, resource inventory, and demonstration projects. The needs assessment stage is complete and the resource inventory stage is just beginning. Demonstration projects will be based on these first two stages.

Tucker (1973) developed a model for the integration of needs assessment into the decision and planning process. She also has implemented this model (Tucker, 1975) at the Central Florida Community College Consortium, in the form of a system for providing information about local labor supply and demand. The model can provide in formation about the supply of trained persons and the demand for training services to satisfy local planning needs. It provides information on a cyclical basis, leading to forecasting patterns. The information is stored in a management information system, compatible across communities, and has the capacity to describe what is presently happening and for building trend information.

Boggs (1977) mentions two specific changes made on the basis of the survey carried out at Chaffey Community College: modification of bus routes was made according to the location of people with transportation problems, and class offerings were increased at an off-campus location during the evening hours in light of high interest in certain courses if offered in the evening.

Community College of Vermont has implemented courses for business and industry at industrial sites in response to requests for such courses generated in their needs assessment process.

Valencia Community College carried out a needs assessment among firemen, and in accordance with their findings, trained them in emergency medical techniques.

Empire State College found through a survey that people were most interested in their individualized contract program. As a result, they have stressed the role of the faculty member in working in a mentor relationship with individuals, rather than groups.

In response to community analysis, Navajo Community College and the University of Arizona are carrying out an extremely effective teacher education program.

This is by no means an exhaustive list. There is nothing so practical as a good theory, according to Lewin. The practicality of a good needs assessment process is also obvious.

Peat, Marwick & Mitchell, while they deplore the failure of most institutions to use the "rational actor" approach to planning, have presented in tabular form the basis for program decisionmaking by postsecondary institutions. Two tables are included. Although the authors advocate a rational approach, based on needs assessment of some kind, they acknowledge the usefulness of approaches based on personal initiative of administrators and on tradition, which essentially rely on demand to determine course offerings.

E ..T V-5

BASIS FOR PROGRAM DECISION MAKING BY INSTITUTION AND PROGRAM TYPE

	INSTITUTIONS OFFERING ADULT EDUCATION PROGRAMS						TYPE OF ADULT EDUCATION PROGRAM			
								Vocational and Work Related		
Number of Programs	Four-Year Colleges and Universities (18)	Community-Junior Colleges (8)	Public School Systems (12)	Public Agencies (22)	Business and Industry (10)	Voluntary Organizations (44)	General Interest (50)	Professional Development (10)	Blue Collar and Technical Training (23)	Basic Educational Attainment (20)
Basis for Program Decision										
Planning and Organized Consultation										
Comprehensive Community Needs Assessment	0	0	1	0	0	3	2	1	1	0
Needs Assessment Focused on Particular Clientele	2	0	4	6	5	11	8	6	8	6
Organized Consultation With Community Groups:										
Industry (Management)	6	5	2	2	2	2	0	8	10	1
Organized Labor	1	0	2	2	0	2	0	1	6	0
Public Agencies or Voluntary Orgs.	0	0	0	5	0	0	2	0	1	2
Citizen Interest Groups	0	0	0	5	0	3	4	0	1	3
Public Hearings	0	0	1	2	0	0	1	0	1	1
Available Community Statistical Data	4	0	2	10	1	3	10	0	5	5
Personal Initiative & Ad Hoc Consultation										
Personal Imagination & Initiative	12	8	8	5	5	23	37	11	12	1
Ad Hoc Consultation With Individuals	13	8	3	7	7	15	21	12	14	6
Tradition and Imitation										
Previous Enrollment Levels	14	8	8	9	5	16	32	10	14	4
Observed, National, Program Trends	1	3	8	2	4	22	23	6	6	5

V.12

X-12

BEST COPY AVAILABLE

EXHIBIT V-6

CHARACTERISTICS OF THE PLANNING PROCESS BY INSTITUTION AND PROGRAM TYPE

	INSTITUTIONS OFFERING ADULT EDUCATION PROGRAMS						TYPE OF ADULT EDUCATION PROGRAM			
								Vocational and Work Related		
Number of Programs	Four-Year Colleges and Universities (16)	Community-Junior Colleges (8)	Public School Systems (12)	Public Agencies (22)	Business and Industry (10)	Voluntary Organizations (44)	General Interest (50)	Professional Development (19)	Blue-Collar and Technical Training (23)	Basic Educational Attainment (20)
Characteristics of the Planning Process										
Persons Involved										
Executive Alone	2	0	9	7	0	12	15	4	7	4
Executive & Selected Staff	9	8	7	6	5	22	24	8	13	11
Executive & Advisory Groups	5	0	4	0	0	3	9	5	4	7
Internal Planning Staff	1	0	0	4	5	3	2	3	0	2
External Planning Body	0	0	2	5	1	6	7	2	2	2
No Identifiable Planner or Planning Group	0	0	0	0	0	0	0	0	0	0
Planning Process										
Systematic Program Planning Based on Needs Assessment	4	0	1	5	5	1	7	3	3	3
Systematic Planning Not Related to Specific Programs or Including Needs Assessment (e.g., MBO, PPBS)	6	8	1	10	4	15	18	9	11	5
No Systematic Planning	10	0	10	9	1	28	25	8	9	12
Planning Period/Range										
A Specific Scheduled Planning Cycle Exists	0	0	0	0	0	15	17	11	12	7
Organization Does Short Range Planning (One Year or Less)	10	8	11	17	8	41	44	10	21	18
Organization Does Long Range Planning (Two Years or More)	3	1	0	6	2	4	6	1	0	2

BEST COPY AVAILABL

EXERCISE

What are possible uses of needs assessment information in your institution?

Determining and clarifying goals and policies

Designing and developing activities

Acquiring resources

Allocating resources

Implementing and monitoring activities

Evaluating performance

Extra-institutional uses

What are possible costs of such a use?

Short-range

Long-range

In money

In personnel

In negative consequences

What are possible benefits of such a use?

Short-range

Long-range

In money

In personnel

APPENDIX

BIBLIOGRAPHY

Alworth, Robert M.; Cohen, Howard D.; and McCuen, John T. "Needs Assessment I: Assessing Community Needs by Telephone." Community, October 1977, pp. 2-4.

Anderson, Richard E. "New Competition for an Old Market." Lifelong Learning, the Adult Years, September 1977, pp. 19-21.

Arthur D. Little, Inc. Survey of Factors Affecting College Choice by College Bound High School Senior Black Women (Proposal). Cambridge, MA: Arthur D. Little, Inc. [1978].

Balderston, Frederick E. Managing Today's University. San Francisco: Jossey-Bass Publishers, 1975.

Beatty, Paulette T. A Process Model for the Development of an Information Base for Community Needs Assessment: A Guide for Practitioners. Bethesda, MD: ERIC Document Reproduction Service, ED 128 616, 1976.

Beder, Harold W. "An Environmental Interaction Model for Agency Development in Adult Education." Adult Education 28 (1978): 176-190.

Beder, Harold, and Smith, Franceska. Developing an Adult Education Program through Community Linkages. Washington: Adult Education Association of the USA, 1977.

Berlin, Lawrence S. "Diversity Without Design: Continuing Education at the University of Michigan." Adult Continuing Education Reporter, December 1976, pp. 1-4.

Boggs, John R. "Needs Assessment II: Community Surveys with Census Data." Community, October 1977, pp. 5-6.

Boshier, Roger. "Motivational Orientations of Adult Education Participants: A Factor Analytic Exploration of Houle's Typology." Adult Education 21 (1971): 3-26.

______________. "Motivational Orientations Revisited: Life-Space Motives and the Education Participation Scale." Adult Education 27 (February 1977): 89-115.

Boshier, Roger, and Riddell, Gail. "Education Participation Scale Factor Structure for Older Adults." Adult Education 28 (1978): 165-175.

Bounds, Stuart M., and Vernon, Christie D. Community Awareness of Thomas Nelson Community College and Accessibility of Educational Programs: A Survey of the Adult Population of the Virginia Peninsula. Bethesda, MD: ERIC Document Reproduction Service, ED 126 965, 1976.

Bowers and Associates. A Guide to Needs Assessment in Community Education. Washington: U.S. Government Printing Office, 1976. U.S. Department of Health, Education, and Welfare, Office of Education.

Boyle, Patrick G., and Jahns, Irwin R. "Program Development and Evaluation." In Handbook of Adult Education, pp. 59-74. Edited by Robert M. Smith, George F. Aker, and J. R. Kidd. New York: Macmillan, 1970.

Bramble, William J., and Mertens, Donna M. Results of Appalacian Education Satellite Project Needs Assessment Conferences. Technical Report No. 14. Bethesda, MD: ERIC Document Reproduction Service, ED 127 934, 1976.

Brennan, John S., and Timiraos, Carmen R. Colorado Adult Needs Assessment Project. Denver: Colorado Department of Education 1975.

Brophy, Kathleen; Grotelueschen, Arden; and Gooler, Dennis. A Blueprint for Program Evaluation. Urbana, IL: University of Illinois, 1974.

Brown, Brewster, W. Methods of Needs Assessment Used in Continuing Education Program Development at Two Year Colleges in the State of New York. Bethesda, MD: ERIC Document Reproduction Service, ED 103 610, 1974.

Burton, John K., and Merrill, Paul F. "Needs Assessment: Goals, Needs, and Priorities." Lincoln, NE: University of Mid-America, 1977. (Mimeographed.)

Carey, J. Forms and Forces in University Adult Education. Chicago: Center for the Study of Liberal Education for Adults, 1961.

Carp, Abraham; Peterson, Richard; and Roelfs, Pamela. "Learning Interests and Experiences of Adult Americans." Berkeley, CA: Educational Testing Service, 1973. (Pre-publication Manuscript.)

Crumpton, John. A Needs Analysis Instrument for Focusing Training Activities in Complex Organizations. Paper presented at Adult Education Research Conference, Chicago, IL, April 1974.

Dave, Ravindra H. Determination of Learning Needs in Rural Areas: A General Design for Case Studies. Paris: International Institute for Educational Planning, 1976.

Eastern Arizona College. Educational Needs Assessment of Adults in the Globe-Miami Area. Final Report. Bethesda, MD: ERIC Document Reproduction Service, ED 107 336, 1975.

Ferguson, L. G. et al. The Assessment of Adult Needs; Phase I of Multi-County Assessment of Adult Needs Project (MAP). Bethesda, MD: ERIC Document Reproduction Service, ED 112 989, 1975.

____________. The Assessment of Business and Industry Needs; Phase II of Multi-County Assessment of Adult Needs Project (MAP). Bethesda, MD: ERIC Document Reproduction Service, ED 112 990, 1975.

Gotsick, Priscilla. Community Survey Guide for Assessment of Community Information and Service Needs. Public Library Training Institutes Library Service Guide Number Two. Bethesda, MD: ERIC Document Reproduction Service, ED 087 392, 1974.

Grabowski, Stanley M. Identification of Assessment of Needs. Bethesda, MD: ERIC Document Reproduction Service, ED 104 463, 1975.

Griffith, William S. "Educational Needs: Definition, Assessment, and Utilization." School Review 86 (May 1978): 382-394.

Grotelueschen, Arden D., and Caulley, Darrel N. "A Model for Studying Determinants of Intention to Participate in Continuing Professional Education." Adult Education 28 (1977): 22-37.

Grotelueschen, Arden D.; Gooler, Dennis D.; Knox, Alan B.; Kemmis, Stephen; Dowdy, Irene; and Brophy, Kathleen. An Evaluation Planner. Urbana, IL: University of Illinois, 1974.

"How to Collect Evaluation Information." How To: Evaluate Education Programs, 2 (January 1978):1-7.

"How to Start a Community Education Program." The Kansas Report on Community Education, April 1978, p. 2.

Hutchins, Elbert C. Learning Needs of Adults in Bourbon, Linn, and Crawford Counties, Kansas. Bethesda, MD: ERIC Document Reproduction Service, ED 108 732, 1975.

______________. The Learning Needs of Adults in Hill County, Texas. Bethesda, MD: ERIC Document Reproduction Service, ED 145 882, 1977.

Information and Referral Center of Orange County. Community Resources Directory for Orange-Osceloa-Seminole Counties, Florida. Orlando, FL: Information and Referral Center of Orange County, 1977.

Johnson Richard B. "Determining Training Needs." In Training and Development Handbook, pp. 16-33. Edited by R. C. Craig and L. R. Bittel. New York: McGraw-Hill, 1967.

Johnston, John W. C., and Rivera, Ramon J. Volunteers for Learning. Chicago: Aldine Publishing Co., 1965.

Kish, Leslie. Survey Sampling. New York: Wiley, 1965.

Knapp, Joan, and Amiel, Sharon. A Compendium of Assessment Techniques. Princeton, NJ: Cooperative Assessment of Experiential Learning, 1975.

Kotler, Philip. Marketing for Nonprofit Organizations. Englewood Cliffs, NJ: Prentice-Hall, 1975.

Lamoureux, Marvin E. Course Length Versus Course Price: Marketing Factors in Program Planning. Paper presented to 1977 National Adult Continuing Education Conference, Detroit, MI, October 31, 1977.

Lehmann, Timothy, and Lester, Virginia. Some Speculations about the Educational Implications of Adult Development. Washington: PECA, 1978.

Lenning, Oscar T. The Outcomes Structure: An Overview and Procedures for Applying It in Postsecondary Education Institutions. Boulder, CO: NCHEMS, 1977.

Lenning, Oscar T., and Cooper, Edward M. Guidebook for Colleges and Universities Presenting Information to Prospective Students. Boulder, CO: NCHEMS, 1978.

Lenning, Oscar T., and Micek, Sidney S. Defining and Communicating Institutional Mission, Role and Scope, and Priorities. (Proposal submitted to FIPSE March 1975.) Boulder, CO: NCHEMS, 1975.

Lumsden, D. Barry. "The Curriculum Development Process in Adult Education." Adult Education 49 (January 1977): 279-284.

McCoy, Vivian R. "Adult Life Cycle Change." Lifelong Learning, the Adult Years 1 (October 1977): 14-18, 31.

McMahon, Ernest E. Needs--of People and Their Communities--and the Adult Educator: A Review of the Literature of Need Determination. Bethesda, MD: ERIC Document Reproduction Service, ED 038 551, 1970.

Medsker, Leland; Edelstein, Stewart; Kreplin, Hannah, Ruyle, Janet; and Shea, John. Extending Opportunities for a College Degree: Practices, Problems, and Potentials. Berkeley, CA: Center for Research and Development in Higher Education, 1975.

Monette, Maurice L. "The Concept of Educational Need: An Analysis of Selected Literature." Adult Education 27 (Winter 1977): 116-127.

Mortimer, Kenneth P., and Leslie, David W., eds. Institutional Self-Study at the Pennsylvania State University. University Park, PA: The Pennsylvania State University, 1970.

National Center for Higher Education Management Systems. "A Handbook of Terminology for Classifying and Describing the Learning Activities of Adults. Draft 6." Boulder, CO, 1978. (Mimeographed.)

Nolfi, George J., Jr., and Nelson, Valerie I. Strengthening the Alternative Postsecondary Education System: Continuing and Part-Time Study in Massachusetts. Cambridge, MA: University Consultants, Inc., 1973.

Parden, Robert J. "Organizational Analysis--A New Role for Institutional Research." In Research and Planning for Higher Education, 17th Annual Forum Proceedings, pp. 165-167. Edited by Robert H. Fenske. Tallahassee, FL: Association for Institutional Research, 1978.

Peat, Marwick, Mitchell & Co. *A Study of the Supply of Adult Learning Opportunities*. Washington, DC: Peat, Marwick, Mitchell & Co., 1978.

Peterson, Richard E.; Cross, K. Patricia; Powell, Susan A.; Hartle, Terry W.; and Kutner, Mark A. *Toward Lifelong Learning in America: A Sourcebook for Planners*. Berkeley, CA: Educational Testing Service, 1978.

Phillips, Herbert A. *Needs Assessment: Importance in Planning, Present Status*. Paper presented at Southern Association of Community and Junior Colleges, Atlanta, GA, December 9, 1975. (ED 133 012.)

Rogers, Everett M., and Shoemaker, F. Floyd. *Communication of Innovations: A Cross-cultural Approach*. 2nd ed. New York: Free Press, 1971.

Rossman, Mark H., and Bunning, Richard L. "Knowledge and Skills for the Adult Educator: A Delphi Study." *Adult Education* 28 (1978): 139-155.

San Diego Community College. *Districtwide Needs Assessment Report. Final Project Report*. Bethesda, MD: ERIC Document Reproduction Service, 1975.

Spikes, Frank. "A Multidimensional Program Planning Model for Continuing Nursing Education." *Lifelong Learning, the Adult Years* 1 (February 1978): 4-8.

Stern, Barry E. *Toward a Federal Policy on Education and Work*. Washington: Government Printing Office, 1977. U.S. Department of Health, Education, and Welfare.

Tucker, Katie D. *Educational Needs Assessment; a Simulation Model for Humanistic Planning*. Paper presented at Association for Education Data Systems Annual Convention, New Orelans, LA, April 16-19, 1973. (ED 087 413.)

______________. *Needs Assessment and Long-Range Planning*. Paper presented at Convention of the Southern Association of Community and Junior Colleges, Atlanta, GA, December 9, 1975. (ED 133 012.)

U.S., National Center for Education Statistics. *Community Information in Education*. Washington: Government Printing Office, 1978.

Waniewicz, Ignacy. *Demand for Part-time Learning in Ontario*. Toronto: DISE, 1976.

Warheit, George; Bell, Roger; and Schwab, John. *Needs Assessment Approaches: Concepts and Methods*. Washington: Government Printing Office, 1977.

Warren, Roland L. *Studying Your Community*. New York: Russell Sage, 1955; Free Press Paperback, 1965.

Yarrington, Roger. "Assessing the Community Base." *Community and Junior College Journal* 46 (November 1975): 9-11.

SOURCE INSTRUMENTS

Learner Instruments

L1. Colorado Needs Assessment. Adult Survey Instrument. Denver, CO: Department of Education, 1975.

L2. Cornell Continuing Education Study. Ithaca, NY: Cornell Institute for Research and Development in Occupational Education, 1975.

L3. Iowa Market/Opinion Survey. New York: Office of New Degree Programs, 1976.

L4. Iowa Postsecondary Alternatives Questionnaire. Enrolled Student Form. New York: Office of New Degree Programs, 1976.

L5. Iowa Postsecondary Alternatives Questionnaire. Adult Resident Form. New York: Office of New Degree Programs, 1976.

L6. A Survey of Continuing Education Students. Poughkeepsie, NY: Associated Colleges of the Mid-Hudson Area, 1975.

L7. A Survey of Continuing Education Needs of Counseling Agency Clientele. Poughkeepsie, NY: Associated Colleges of the Mid-Hudson Area, 1975.

L8. A Study of Post-Secondary Education Needs in Northeastern New York State: Secondary Analysis.. Latham, NY: Capital Associates, 1975.

L9. Adult Learner Survey. Long Island, NY: Regional Advisory Council on Higher Education, 1976.

L10. Senior Citizen Survey Questionnaire. Long Island, NY: Regional Advisory Council on Higher Education, 1976.

L11. Adult Education Survey. Madison, WI: University of Wisconsin-Extension, 1973.

L12. Continuing Education Survey. Wausau, WI: University of Wisconsin-Extension North Central Area, 1978.

L13. Continuing Education Survey 1976. Baraboo, WI: UWC-Baraboo/Sauk County, 1976.

L14. A Survey of Farmers. Madison, WI: University of Wisconsin-Extension, 1978.

L15. A Survey of Married Couples in Racine and Kenosha Counties. Madison, WI: University of Wisconsin-Extension, 1977.

L16. Community Citizens Survey. Madison, WI: University of Wisconsin-Extension, 1978.

L17. A Survey of Learning Needs; North Central States Planning Project for Continuing Education in Nursing. Madison, WI: University of Wisconsin-Extension, 1978.

L18. Nursing in a Camp Setting. A Camp Director's Questionnaire. Madison, WI: University of Wisconsin-Extension, 1978.

L19. Survey of Educational Needs Among Engineers, Scientists and Technicians in Wisconsin. Madison, WI: University of Wisconsin-Extension, 1973.

L20. Energy Extension Service (EES) Evaluation Survey. Madison, WI: University of Wisconsin-Extension, 1978.

L21. Municipal Services Survey of Training Needs. Madison, WI: University of Wisconsin-Extension, 1978.

L22. Dairy Survey. Madison, WI: University of Wisconsin-Extension, 1974

L23. Youth Interests Survey. Madison, WI: University of Wisconsin-Extension, 1976.

L24. In-Service Needs Assessment. Boulder, CO: Boulder Mental Health Center, 1978.

L25. A School & College Survey. Red Bank, NJ: Don White, Inc., 1975.

L26. Senior Survey. San Diego, CA: San Diego Community College District, 1977?

L27. CASA Survey Questionnaire. Long Island, NY: Regional Advisory Council on Higher Education, 1976.

L28. Population Profile. Norwich, CT: Mohegan Community College, 1973?

L29. Educational Needs Screener. Princeton, NJ: Delaware County Community College, 1978.

L30. Los Rios Community College Survey. Princeton, NJ: Los Rios Community College, 1977.

L31. Survey of Educators. Kansas City, MO: Metropolitan Community Colleges, 1978.

L32. Continuing Students Questionnaire. Kansas City, MO: Metropolitan Community Colleges, 1978.

L33. Site Manager Questionnaire. Waukesha, WI: Southeastern Wisconsin Regional Planning Commission, 1974.

L34. Existing Outdoor Recreation User Survey (Snowmobilers). Waukesha, WI: Southeastern Wisconsin Regional Planning Commission, 1974.

L35. Existing Outdoor Recreation User Survey (Wilmot Mt.). Waukesha, WI: Southeastern Wisconsin Regional Planning Commission, 1974.

L36. Existing Outdoor Recreation User Survey (Summer). Waukesha, WI: Southeastern Wisconsin Regional Planning Commission, 1974.

L37. Existing Outdoor Recreation User Survey (Boating). Waukesha, WI: Southeastern Wisconsin Regional Planning Commission, 1974.

L38. Existing Outdoor Recreation User Survey (Winter). Waukesha, WI: Southeastern Wisconsin Regional Planning Commission, 1974.

L39. Adult Educational and Educational Media Interests Survey. Orono, ME: Social Science Research Institute, 1977.

L40. Community/Adult Educational Assessment (Kennebec County). Orono, ME: University of Maine, 1977?

L41. High School Senior Survey. Augusta, ME: University of Maine, 1977?

L42. Needs and Interests of Female Students Survey (Valencia Community College). Orlando, FL: Center for Continuing Education for Women, 1977?

L43. Project Awareness. Orlando, FL: Valencia Community College, 1977?

L44. What Is My Tomorrow? Osceola County Residents Survey. Orlando, FL: Valencia Community College, 1977?

L45. Student Goals Inventory. Orlando, FL: Valencia Community College, 1978.

L46. Senior Citizens Survey. Orlando, FL: Valencia Community College, 1977?

L47. McCoy Center Survey. Orlando, FL: Valencia Community College, 1977?

L48. Education Survey. Orlando, FL: Valencia Community College, 1977?

L49. Tangelo Park Survey. Orlando, FL: Valencia Community College, 1974.

L50. Learner Survey. West Valley Community College. San Jose, CA: Diridon Research Corporation, 1972.

L51. Globe-Miami Area Educational Needs Survey. Thatcher, AZ: Eastern Arizona College, 1974.

L52. Multi-County Needs Assessment Project. Waco, TX: McLennan Community College, 1975.

L53. Student Off-Campus Library Services Survey. Tallahassee, FL: Commission on Educational Outreach and Service, 1976.

L54. Adult Learner Survey. Tallahassee, FL: Commission on Educational Outreach and Service, 1976.

L55. Adult Population of the Virginia Peninsula Survey. Hampton, VA: Thomas Nelson Community College, 1976.

L56. Survey of Adult Learning. Hillsboro, TX: Hill Junior College, 1977.

L57. Recent Alumni Survey. Boulder, CO: NCHEMS Better Information for Student Choice of College Project, 1978.

L58. Former Student Survey. Boulder, CO: NCHEMS Better Information for Student Choice of College Project, 1978.

L59. Continuing Student Survey. Boulder, CO: NCHEMS Better Information for Student Choice of College Project, 1978.

L60. Program Completer/Graduating Student Survey. Boulder, CO: NCHEMS Better Information for Student Choice of College Project, 1978.

L61. Entering Student Survey. Boulder, CO: NCHEMS Better Information for Student Choice of College Project, 1978.

Community Instruments

C1. Adult Education Questionnaire. Colorado Springs, CO: Colorado Springs School District Eleven, 1972.

C2. Community Perception Survey. Beloit, WI: University of Wisconsin-Extension, 1977?

C3. Environmental Concerns Survey. Madison, WI: University of Wisconsin-Extension, 1974.

C4. Citizen Survey. Washington: Community Education Program, 1976.

C5. Community Check List of Assets, Needs and Possibilities for Improvement. Chicago: Community Improvement Program, 1974-76.

C6. Black Community Questionnaire. Orlando, FL: Valencia Community College, 1977?

C7. Business and Industrial Firms Survey Instrument. Ithaca, NY: Cornell Institute for Research and Development in Occupational Education, 1975.

C8. Small Business Questionnaire for Telephone Survey. Whitewater, WI: University of Wisconsin-Extension, 1976.

C9. Land Use Planning Survey (St. Croix County). Madison, WI: University of Wisconsin-Extension, 1977.

C10. Survey of Employers. Kansas City, MO: Metropolitan Community Colleges, 1978.

C11. Employer Questionnaire. Augusta, ME: University of Maine, 1977?

C12. Survey of EMT-Paramedic Training Needs. Orlando, FL: Valencia Community College, 1978.

C13. Motor Vehicle Traffic Accident Investigation Course Survey. Orlando, FL: Valencia Community College, 1977?

C14. Questionnaire on the Proposed Program for Optometric Assistant. Orlando, FL: Valencia Community College, 1974.

C15. Questionnaire on the Proposed Program for Physical Therapist Assistant. Orlando, FL: Valencia Community College, 1974.

C17. Questionnaire on the Proposed Program for Medical Assistant. Orlando, FL: Valencia Community College, 1974.

C18. Questionnaire on the Proposed Program for Dental Hygienist Assistant. Orlando, FL: Valencia Community College, 1974.

C19. A Method of Inventory for the Lifelong Education Activities in a Community. East Lansing, MI: Institute for Community Development, Michigan State University, 1976.

C21. Business and Industry Questionnaire. Thatcher, AZ: Eastern Arizona College, 1974.

C22. Community Needs Assessment Sample Questionnaire for Agency Heads. Morehead, KY: Appalachian Adult Education Center, Morehead State University, 1973.

C23. Interview Guide, Research and Other Services Task Force. Tallahassee, FL: Commission on Educational Outreach and Service, 1976.

Provider Instruments

P1. Survey of Iowa Institutional Resources for Non-Traditional Education. Princeton, NJ: Educational Testing Service, 1976.

P2. Survey of Adult and Continuing Education Programs, Courses and Activities. Ithaca, NY: Cornell Institute for Research and Development in Occupational Education, 1973.

P3. Survey of Adult and Continuing Education Programs, Courses and Activities. Ithaca, NY: Cornell Institute for Research and Development in Occupational Education, 1974.

P4. Organizations and Agencies Survey Instrument. Ithaca, NY: Cornell Institute for Research and Development in Occupational Education, 1975.

P5. Counseling Service Questionnaire. Poughkeepsie, NY: Associated Colleges of the Mid-Hudson Area, 1975.

P6. Programs in the Business Sector. Long Island, NY: Regional Advisory Council on Higher Education, 1976.

P7. Parks and Museums Survey. Long Island, NY: Regional Advisory Council on Higher Education, 1976.

P8. California Academic Library Report 1977. Sacramento, CA: California State Library, 1977.

P9. California Public Library Report 1977. Sacramento, CA: California State Library, 1977.

P10. California Special Library Report 1977. Sacramento, CA: California State Library, 1977.

P11. Institution Library Information Survey. Tallahassee, FL: Department of State, Division of Library Services, 1976.

P12. Public Libraries, Fiscal Year 1975. Tallahassee, FL: Department of State, Division of Library Services, 1975.

P13. Public Library Information Survey. Tallahassee, FL: Department of State, Division of Library Services, 1976.

P14. College and University Libraries, Fall 1976. Tallahassee, FL: Department of State, Division of Library Services, 1976.

P15. Library Survey. Athens, GA: University System of Georgia, 1976.

P16. Public Library Annual Statistical Report. Bismarck, ND: North Dakota State Library, 1976-1977.

P16a. Public Library Annual Statistical Report (Abridged Version). Bismarck, ND: North Dakota State Library, 1976-1977.

P17. Annual Statistical Report for College, University, and Special Libraries. Bismarck, ND: North Dakota State Library, 1976-1977.

P18. Community Service and Activity Inventory. Washington: Community Education Program, 1976.

P19. Community Service and Activity Needs. Washington: Community Education Program, 1976.

P20. Employee Survey. Kansas City, MO: Metropolitan Community College, 1978.

P21. Educational Outreach and Service Resources and Porgrams. Tallahassee, FL: Commission on Educational Outreach and Service, 1976.

P22. Survey of Methods of Needs Assessment. Albany, NY: SUNY, 1974.

P23. Questionnaire for the Continuing Education Faculty Library Survey. Tallahassee, FL: Commission on Educational Outreach and Service, 1976.

P24. Educational Services Task Force. Tallahassee, FL: Commission on Educational Outreach and Service, 1976.

AN INVENTORY OF PRODUCTS AND SERVICES AVAILABLE FROM NCHEMS AND THE COLLEGE BOARD

(To Be Added)